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ORIGINAL LECTURES.

DYSMENORRHEA.

A Clinical Lecture delivered at the Post-Graduate School of New York.

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(Reported by Edward Develin, M.D.)

GENTLEMEN: To-day I wish to bring specially to your notice the subject of dysmenorrhœa, illustrating my remarks with such cases as I shall present for your personal examination.

Our first patient is a young girl, seventeen years of age, unmarried, who commenced to menstruate when she was sixteen. She has since that time always been regular in her menstruation, the flow lasting from four to five days. During these periods she always suffers from pain, which continues during the flow. She menstruated last, just one week ago. She has no special difficulty with her urinary organs. She has had constant but not very free leucorrhœa, with pain in the left side; bearing-down pains, continuous headache, and also pain extending down the left leg; there is also tenderness of the left ovary. When the pain is most severe, the breasts, she states, ache very badly. The pain in the head, I should state, is almost always upon the right side. All of these symptoms are increased just previous to menstruation.

You will remember that the patient has just passed the age of puberty, and from the symptoms given us in connection with this fact we should be led to believe that the sexual organs are not sufficiently developed to perform their natural functions; or, in other words, she may be suffering from an arrest of development of the sexual organs, or perhaps a malformation, or both.

One point which strikes me very forcibly is her nervous symptoms. You are, of course, aware that much has been said and written about the disturbances of the nervous system due to a reflex irritation of the sexual system. Neurologists are apt to claim such cases as due to the nervous affection; that is to say, that the primary difficulty arises in the nervous system, leaving out of account to a large extent the sexual system. Gynecologists, on the other hand, are perhaps apt to refer the difficulty to the sexual organs, and regard the nervous affection as secondary, or a condition induced by reflex action from irritation of the sexual organs; they perhaps view the case entirely through the speculum.

Now, I have tried to be impartial, and to give to the nervous system its due, and also to share the responsibility of the derangement with the sexual organs. I have investigated carefully by clinical observation, and endeavored to decide how much of the disturbance is due to a malcondition of the nervous system primarily, and if the sexual irritation was not secondary. The

neurologist, by his experience with nervous diseases and accurate means of investigation, might make a diagnosis with facility, which, perhaps, might puzzle the gynecologist in his everyday practice; hence, in obscure cases, it is well to seek the counsel of a neurologist. During my observations, however, one rule has been quite reliable as a guide in uterine diseases complicated with nervous troubles, viz., Which appeared first, the nervous symptoms or symptoms of sexual derangement? Did this patient first manifest symptoms of distress in the head and limbs, or were symptoms of distress noticed in the pelvic region, in the sexual organs. It is quite fair to suppose that the symptoms which appeared first indicate the primary lesions, and such I have found to be almost invariably the rule; but, like all rules, there are rare exceptions.

In this case, her local trouble appeared first, followed by hemicrania, pains in the body and left leg. These appeared some time after she had been suffering from dysmenorrhœa. So I think that we are perfectly safe in saying that her nervous disturbance is reflex, the nervous symptoms being always aggravated during menstruation.

Menstruation, when performed by perfectly normal sexual organs, is not associated with any marked disturbance. On an average, forty-five per cent. of women suffer from some disturbance, the remaining fifty-five being free from distress. So that when any general symptom is very decidedly aggravated during the menstrual period, we take it as positive or presumptive evidence that it arises from some derangement of the sexual organs. More than that, if a nervous symptom which appeared at first only at the menstrual period, eventually becomes continuous, we would infer that it is reflex. Instead, therefore, of directing our treatment to the nervous system, we at once direct our attention to the sexual system, where we know that a difficulty exists, and if our diagnosis be correct, the disturbance of the nervous system will abate as the local trouble is relieved. If relief does not follow our local treatment, this shows that either the nervous symptoms arise from a disease *per se*, or else the nervous trouble was at first reflex but in time became centric and continued after the cause was removed. The rule, however, which I have just stated as to the primary lesion in these cases, is quite reliable for purposes of diagnosis.

This patient is suffering from an anteflexion of the body of the uterus, with a partial anteflexion of the neck, the uterus being also a little below the normal elevation. I have frequently stated that we often meet with this anteflexion of the neck owing to an imperfect invagination of the cervix. As the uterus settles down into the vagina at a certain period of life, the posterior wall in these cases goes down faster than the anterior, making the length of the posterior portion of the cervix abnormally longer than the anterior. This shortness anteriorly, you can then readily understand, has a tendency to draw the cervix forward, and hence is one of

the causes of anteflexion of the cervix. I find on examination, also, a marked tenderness of the right ovary; this may be the cause of the pain extending down the right leg of which she complains, the irritation at the ovary having extended to the sacral plexus of nerves. In relation to the headache here existing, we all know that nervous exhaustion from over-functional activity of the sexual organs tends to develop sick headache, and that it is also an established fact that functional derangement of these organs will produce this pain in the head, and we also know that this derangement is in some way related to epilepsy. We must not, however, attribute every sick headache to this cause, any more than we would say it is the cause of every case of epilepsy.

Now as to the management of this case. We shall treat it as an ordinary anteflexion, restoring the uterus to its normal position and retaining it there with an anteversion pessary. Dr. Emmet, in a case like this, converts it into a simple anteversion by pushing the cervix backward, so that the uterus is made straight.

Let me say here that that treatment will answer in a case like this, because the patient is not suffering from any disturbance of the bladder. We must remember, however, that in many cases of anteversion we have frequent and painful urination, which is a source of great discomfort to the patient. In that class of cases, therefore, if you were to follow out Emmet's method as I have just stated, you might, perhaps, relieve the dysmenorrhœa, but you would certainly aggravate the cystic trouble.

We should always bear in mind, in these cases of malformation, that we have both hyperæmia and hyperæsthesia of the parts; so that the uterus, owing to its irritable condition, will not perform its natural functions without complaining. As a rule, I think that hyperæmia always accompanies these malformations, but I presume that it is due to the imperfect functional action primarily.

In dysmenorrhœa we have one class of pathologists who tell us that the difficulty arises from some obstruction of the cervical canal caused by the flexion. Another class will tell us that the flexion has nothing to do with it; both classes bringing forward cases to prove their theory.

I endeavor to harmonize these statements in this way. I believe you may have dysmenorrhœa from stenosis and also where stenosis does not exist. I believe that in those cases where flexions exist, if the physiological hyperæmia at the time of menstruation is not sufficient by its engorgement to straighten the uterus and render the canal free from occlusion, that you will have dysmenorrhœa. This form of dysmenorrhœa, therefore, is due to mechanical causes, and in these cases the pains will be intermittent like miniature labor pains, the flow being more profuse after the pains; whereas, the pain which is marked by a dull aching feeling, continuing through the entire flow, I believe to be due to hyperæmia and hyperæsthesia of the parts, and not due to obstruction from true stenosis or flexion, even though the latter may exist. You can readily understand how either one of these conditions may cause dysmenorrhœa; and yet we meet cases in which there are hyperæmia, hyperæsthesia, and malformation, and no dysmenorrhœa occurs.

When we are not positive as to which of these conditions produces the dysmenorrhœa, we are set at rest in regard to the treatment. Whether it be due to one or the other, we should endeavor to remove both. Straighten the uterus and relieve the hyperæmia and hyperæsthesia as indicated. So that while we may be puzzled to know which is the first link in the chain of the pathology of the disease, we have no need to doubt about the treatment. Therefore, if you find a malformation, do not be content with removing that, but at the same time treat the accompanying engorgement and hyperæsthesia in the same manner as you treat other hyperæmic conditions of the uterus.

I believe that much of the good that comes from Sims's operation of dividing the cervix is not so much due to the operation, but the relief of the hyperæmia. The free hemorrhage and rest in bed after the operation do much toward relieving these tender, irritable states of the uterus. And when the woman gets up and assumes her regular vocations, I believe that unless she becomes pregnant the same difficulty will recur. I think the failures which occur in treating dysmenorrhœa are principally due to neglect on the part of the physician to treat both the malformation and the derangements of circulation and innervation *at the same time*.

Now, in the case before us, while we are fully considering our local treatment, we must remember that the patient is only seventeen years of age; there is, therefore, yet hope of building up the development of the sexual organs, in order that their functions may become normal.

Much has been said and written in relation to the development of the sex in relation to the development of the sexual organs. Some who are extremely orthodox believe that all a woman has to do in order to become perfectly developed, is to wear low-heeled shoes and abandon the use of corsets. One will say the arrest of development is due to wearing corsets; another, to using high-heeled shoes; others, again, attribute it to mental aspirations and high mental culture. A rational scientist, however, takes a broader view of the whole matter, and will state that either or all of these will tend to arrest development. We know positively that it is essential to the woman's well-being that the sexual organs should be perfectly developed in order that they may perform their natural functions perfectly. We also know that we can do most to secure their development through their general organization. Instead, therefore, of giving our attention exclusively to the cure of malformations, hyperæmia, etc., let us turn our attention also to the improvement of general nutrition to further the desired development. As the sexual organs are dependent upon the general organization, we can stimulate them through the nutritive system. Therefore give such patients good air, good food, not too much rest, but good hygienic surroundings.

Our second patient is twenty-three years of age, and has been married eight months. She has suffered severely all her menstrual life from dysmenorrhœa, although her menstruations have always been regular.

During the last eight months, that is to say, since she has been married, her dysmenorrhœa has been increased. This is an important point for us to bear in mind, as there are certain cases of uterine disorders in which a change in social relations effects the most satis-

factory results. On the other hand, however, there are cases in which this change effects the most disastrous results.

The question as to the results of marriage in certain persons afflicted with uterine disorders will often be put to you by the heads of families; it is, therefore, of great importance that you give a correct answer to their interrogations, as such answer may involve the happiness of two persons, at least. There are certain affections of the uterus, such as slight hyperæmia or leucorrhœa, which will not be increased or aggravated by matrimonial relations. Then, again, there are other affections which are invariably made worse by sexual intercourse, and the case now before us I judge to be one of these latter.

If, now, you are asked whether it will be well for a woman to marry whom you know is suffering from some organic disease, it will be wiser for you to say that a matrimonial alliance will be likely to increase her uterine difficulty. If, however, the case be one of mere functional disturbance, it may be improved by such relations. You cannot be too particular on this point, and should be on your guard against making an error in your answer.

This patient presents to us a history which indicates that there is in all probability organic disease, or malformation. When from the very outset of the menstrual function dysmenorrhœa has been the rule, we may be almost certain there is some organic lesion. Your advice then should be: don't marry.

I will now make an examination in this case, and give you the physical signs as I obtain them by the touch.

I find here a malformation in the relation of the cervix with the vagina, the uterus being also low down in the pelvis. I find there is no invagination of the anterior wall of the cervix; it is, however, invaginated slightly posteriorly, but not much. There is here a curious condition of things, being more marked than I have ever seen before. The vagina, anteriorly, comes off in a perfect line with the cervical canal. As I pass my finger along the anterior vaginal wall it comes into contact at once with the os externum; the anterior wall of the cervix being so very thin, there is not the slightest invagination. We have here also a marked anteflexion of the cervix, due, I have no doubt, to this imperfect invagination and arrest of development. In speaking of the development of the sexual organs, I have told you that at the end of the primary development the vagina and cervix simply meet; there is at that time no invagination of the cervix. But during the secondary development the uterus settles down into the pelvis and invagination occurs. Sometimes this process is arrested, owing, perhaps, to some malnutrition of the part, or some inflammatory action. Such an arrest of development has undoubtedly occurred in this patient, and the same I believe to be the cause of her dysmenorrhœa, aggravated by the hyperæmia which is developed sooner or later by such malformation.

As I now place the woman in Sims's position, and pass the sound into the cervical canal, it passes back towards the hollow of the sacrum, and when I reach the internal os I am compelled to revolve the sound in order that it may reach the fundus, thus proving the phy-

sical signs as obtained by the touch to be correct. On measuring the length of the body I find it to be but one and one-half inches in length. We cannot, then, with this history and these physical signs, have any possibility of doubting the cause of her dysmenorrhœa and sterility.

Now as to treatment. Our first idea would be to correct this malposition of the cervix, it being the most marked. That we can do by performing Sims's operation, and, perhaps, in that way relieve her dysmenorrhœa. This operation consists in dividing the posterior wall of the cervix, by this means changing the direction of the cervical canal so that it would be almost or quite straight. In this way you cure one malformation by producing another; but you relieve your patient, if not permanently, for the time being. By performing this operation we can sometimes cure the patient of her sterility and also her dysmenorrhœa. The dysmenorrhœa, however, will recur again if she does not become pregnant; for this reason the operation often fails because we do not select our cases. If you have a patient with a large, well-developed body of the uterus, and one who menstruates normally and freely, except that she has dysmenorrhœa, having no other trouble but this forward flexion of the cervix and imperfect invagination, we might expect to accomplish much by Sims's operation. But in this case I am sure it would prove a failure, as the whole uterus is undersized, and I doubt whether she could ever become pregnant, or carry on gestation if she did. We might overcome the dysmenorrhœa for the time being, but I do not think we could cure her sterility. I shall, therefore, decline to operate, as I do not think any permanent relief can be obtained.

I have said that if after the operation the woman does not become pregnant her dysmenorrhœa will return. This, perhaps, needs an explanation. The reasoning is simple enough. In all of these operations we have resulting scar tissue. If the cervical canal be only enlarged at the time being, mechanical factors not being brought into play to maintain the enlargement secured, we have this cicatricial tissue contracting down and shortening the cervix with partial occlusion of the canal taking place in a few years. In some cases the intrauterine stem is passed into the canal to keep it widely open, but this is too frequently of itself a source of great danger and irritation.

If this woman were but seventeen or eighteen years of age we might, by performing Sims's operation, afterward introducing the stem pessary, hope to cure her of her dysmenorrhœa, so that she would become more developed and afterwards bear children. But at twenty-two years of age we cannot hope for this.

In our present case we can relieve the hyperæmic condition there existing, and can also cure the catarrh of the mucous membrane; we can also dilate the cervical canal. She might by some accident become pregnant; we cannot always be positive in these cases.

I know of no operation in uterine surgery which has been so much abused as this operation of Sims's just spoken of. Division of the cervix has been so often performed for all kinds of malformations that it has given rise to rather an energetic discussion among gynecologists. I am sure, from observations during a long period, and giving due weight to both sides of the question, that the case now before us is the limit of the

desirability of the operation. By this I mean, when forward flexion of the cervix *exists alone* we may hope for the best results from the operation.

We should, however, bear in mind that the object of this operation is to relieve dysmenorrhœa and sterility, and if it does not relieve the sterility, the patient gains nothing in the long run, but may in time be the worse for it. If the operation makes pregnancy possible, the development of the uterus during gestation will cure the original arrest of development; but if pregnancy does not occur, the operation is but a mutilation added to a deformity, and the two are worse for the patient than the original malformation alone.

ORIGINAL ARTICLES.

SOME THERAPEUTICAL USES OF PILOCARPIN

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INSOMNIA OF ALCOHOLISM.

A LITTLE over a year ago I had a case of uræmic convulsions in a vigorous male subject, in which the convulsive action was quieted by venesection and the hypodermic injection of morphia. In the semicomatose condition succeeding, he was seen by Dr. J. C. Mackenzie as consulting physician. A very active delirium followed, and pilocarpin muriate was employed to promote the elimination of urea. The tranquillizing, soporific influence of this alkaloid was so marked as to suggest the probability of its usefulness in aconioic insomnia, in which an agent capable of producing sleep without specific action upon the nervous system, at the same time inducing rapid excretion of alcohol, and without any of the intoxicating properties of the narcotic drugs so universally resorted to in this condition, would appear to be a special desideratum.

It was only a short time until an opportunity occurred to test its practical value. This presented in the case of a plethoric individual who was accustomed nightly to woo "nature's sweet restorer" with a pitcher of beer. In consequence, a gastric catarrh had developed, for the relief of which whiskey in copious and frequent draughts was the remedy chosen. This in turn had brought on the "horrors," and the common enemy of mankind was but poorly concealed in the background. The patient had already, for a day or two before I saw him, been given chloral and potassium bromide in scruple, half drachm, and drachm doses without any beneficial effect. It made him wilder, and more intractable, provoking a mental and physical state of disquietude and torture beyond what the whiskey itself might have been justly responsible for. He was retching every few minutes, eyeballs bloodshot, protruding and glaring, countenance suffused and bloated, hair dishevelled, howling and cursing—the picture of a tormented wild beast, rather than of a human being. One-third of a grain of pilocarpin muriate (Merck's) was administered hypodermatically, and a large mustard plaster placed over the epigastrium. In ten minutes copious perspiration, with free salivation ensued, and slumber succeeded, lasting continuously for five hours. The

patient awoke quiet and *sober*. Ice water was asked for and given. Short, restful naps were taken. No desire for liquor was expressed, and the importance of abstaining from it altogether was urged and acquiesced in. Milk and lime-water, buttermilk and beef extract were given *ad libitum*. The gastric catarrh was successfully treated with resorcin, gr. viij *ter in die*. The catarrhal trouble in this case may have been ameliorated by the pilocarpin's unloading the turgid capillaries of the stomach, but in other cases of drinkers' dyspepsia, in which pilocarpin was not administered, resorcin in my hands had proved so specific in its action that I did not venture to withhold it in this instance. Pilocarpin was continued in one-third grain doses for two more successive nights, when cure was complete. He refrained altogether from the use of liquors for one month, a practice he had not observed before for years. During this period of abstention he ate well, slept well, and, as he himself stated, never felt better in his life.

Unfortunately for himself he was not in political affiliation with the prohibition party, and being an ardent patriot, could not withstand the blandishments of his party associates. He lapsed again, again stood upon the ragged edge—and again was brought back to self-control and duty by pilocarpin. He was also strictly abstemious after the second attack. Once more official decapitation caused him to lose his balance; pilocarpin restored it, and he is to-day leading a perfectly sober life.

The remedy has been tried with as signal success in two other subjects of alcoholism. The history of such cases is so familiar to the profession as to make detail unnecessary. One was an habitual drinker, with occasional excesses, and the other a "spreer," with intervals of abstention.

The *sobering* properties of pilocarpin are remarkable. After the sleep the patient arouses perfectly rational and subdued—a consummation of no little importance, as all know who have to treat the victims of alcohol, since it renders them amenable to moral influences. The transformation wrought in the physical appearance is almost marvellous. The tense, red, bloated countenance, the bleared congested eyes, and general repulsive facial aspect pass away. The skin looks pale, clean and soft, the features calm and easy, the eyes clear or with only a slight yellowish tinge. Clothed in such an innocent guise the subject of a recent debauch might easily deceive even an expert.

There are three ways in which pilocarpin doubtless exercises a therapeutic influence in alcoholism. 1. By lowering the cerebral blood pressure. 2. By eliminating alcohol. 3. By increasing the absorption of oxygen.

The throbbing carotids, the suffused face, and congested eyes in acute alcoholism all bespeak an increase of blood pressure in the cerebral vessels. It goes without saying that an increase of irritability of nervous centres is consequent thereto. The rapid and enormous cutaneous transpiration and salivary outflow occasioned by the exhibition of pilocarpin diminish the blood pressure, and must lessen nervous excitability in proportion to the extent to which it was enhanced by the previous pressure.

Alcohol is carried off through the lungs, skin, kidneys, and general emunctory glands, while yet a not inconsiderable amount is consumed in the system through oxidation. The rapidity of elimination is in direct ratio to the activity of the excretory organs. Pilocarpin produces increased frequency of respiratory acts with much greater increase in cutaneous and glandular processes of excretion. The lowering of blood pressure, with increase in the frequency of respiration and of the heart's action, also promotes a more rapid evolvement of the physio-chemical processes upon which the combustion of alcohol depends. The excitant action of alcohol upon nervous structures is without question, and when all the means through which the agent may find external conveyance, and internal combustion are brought into most active operation by pilocarpin, the relief to over-stimulated nerve tissue must be very considerable.

It has been shown by Harley and others, that ingestion of alcohol in quantity interferes with the absorption of oxygen by the blood, and Böcker and others have demonstrated that it lessens the quantity of carbonic acid exhaled. Increase of carbonic acid in the blood, beyond what should normally circulate in it, and decrease of oxygen, set up the widest range of disordered function in all tissue cells according to the disproportion in which the first element exists to the second. Therefore, the removal of alcohol from the circulation through pilocarpin, as already sufficiently indicated, restores to the blood commensurate capacity for absorption of oxygen, favors the separation of effete products, and by thus effecting a balance between tissue decay and repair, contributes to physiological rest.

LARYNGEAL STENOSIS—LARYNGEAL CONGESTION.

Last December a boy six years of age was taken with the then prevailing endemic of measles. The efflorescence over the body surface was complete, and the laryngeal mucous membrane was involved to such an extent as to produce a condition of stenosis. The temperature ranged from $102\frac{1}{2}^{\circ}$ to $103\frac{1}{2}^{\circ}$; pulse rate 132; respiration frequent, harsh and embarrassed, voice husky and whispering, with a tight stridulous rasping cough, which harassed him so frequently as to have very little interval for rest. He required constant attention day and night. After the expiration of a week's sickness the temperature was $104\frac{1}{2}^{\circ}$; pulse 145; respiration rapid, labored and noisy, countenance pinched and anxious, the alæ of the nose following the movements of respiration, with a racking, dry, hoarse cough which came on in paroxysms every few minutes, causing the little fellow to jump up in bed, throw his arms wildly about in the air as though seeking to clutch something, while the color of his face changed to a livid hue. He wanted his mother constantly beside him. It was evident that vigorous measures for his relief must be instituted at once, and, theoretically, pilocarpin offering the best promise, it was administered in the dose of one-eighth of a grain by the mouth. Within fifteen minutes he was bathed in perspiration. Profuse salivation also resulted, and he sank into a tranquil, quiet slumber of half an hour's duration—a longer and easier sleep than he had enjoyed at any

time during the whole of his illness. The temperature declined to $102\frac{1}{2}^{\circ}$, the pulse fell to 125, the breathing, though still rapid, was easy, the cough loose, less frequent, and but little disturbing. From this time on, his progress towards convalescence was marked and uninterrupted. A medical friend and relative who had seen the case and was cognizant of its gravity, was somewhat shocked at what he deemed hazardous experimentation, but he cheerfully accepted the result.

On the 17th of December, a contralto singer applied for the relief of hoarseness, dependent upon congestion of the larynx from cold. She had an engagement to sing in concert the evening of the 18th, which she was exceedingly anxious to fill. One-third of a grain of pilocarpin was prescribed to be taken per orem at bedtime, and crystals of potassium nitrate, the size of a small pea, to be slowly dissolved in the mouth throughout the next day. She was enabled to fulfil her engagement satisfactorily.

In the above cases the decrease in blood-volume, induced by pilocarpin, lowered the blood-pressure, relaxed the engorged vessels, reduced the swelling of the laryngeal mucous membrane through the occurrence of free secretion upon its surface, and the blockade being thus raised, natural forces were able to effect resolution without further aid.

I have made use of pilocarpin scores of times in uræmia, alcoholism, unilateral sweating, hyperhidrosis, diphtheria, and membranous croup, and with the exception of sharp ephemeral pain at the neck of the bladder, and in the course of the urethra which two male patients complained of, have met with no unpleasant effects—no cephalalgia, nausea, or vomiting. It has been extravagantly extolled in diphtheria and membranous croup by some German writers, but I have found it utterly worthless in these diseases.

I have ventured to submit such little experience with the drug for the reason that its employment as yet has been comparatively limited, and consequently even meagre therapeutical records may have an interest which they would not have when pertaining to an agent in common use.

DISINFECTANTS.

PRELIMINARY REPORTS OF THE COMMITTEE ON DISINFECTANTS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

XIX.

REPORT OF SOME EXPERIMENTS ON BURNING SULPHUR IN CLOSED ROOMS. MADE UNDER THE DIRECTION OF

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ABSTRACT.

THE physical changes which sulphur undergoes in the process of combustion are described as follows in Lunge's standard work on the manufacture of sulphuric acid.

"Sulphur melts at 111.5° C. (232.7° Fahr.) and

forms a thin light yellow liquid which, on being more strongly heated, becomes darker and thicker; at 250° to 260° C. (482° to 500° Fahr.) it is nearly black, and so viscid that it does not run out when the vessel is upset; at a still higher temperature it becomes thinner again, keeping its brown color; and at 440° C. (824° F.) it boils, forming a brownish-red vapor, but it begins to volatilize before boiling.

"This is by heating out of contact with the air. When heated in the air the same changes take place until the temperature of combustion is reached, which, according to Lunge, is 260° C. (482° F.). It then takes fire and burns with a purplish-blue flame, forming SO₂ and giving out 2221 units of heat."

In our experiments a room entirely enclosed by wood was first used. The pine boards forming the walls, ceiling, and floor were generally matched, but in spite of continued calking with rags its condition as to tightness was not satisfactory; however, three experiments with burning sulphur were performed, and a part of the desired results obtained. It was then abandoned with the idea that the results with regard to the amount of sulphur which it is possible to burn in a given space would be of no value. We will call this *Room A*, and the small bedroom with plastered walls which was afterwards used, *Room B*. Room A was 16½ feet long, 8½ feet wide, and 11 feet high, and contained, therefore, 1512.5 cubic feet (42,831.8 litres, or 42,831.8 c. metres). In one side was a window about 2 by 2½ feet; in the adjacent side nearer the floor was also a single pane of glass about 8 by 10 inches.

Experiment No. 1, Room A.

In a large tin pan holding about 12 quarts was placed an iron kettle holding 5½ quarts, and supported in the pan by an earthen plate; in the kettle were placed 6 pounds of broken brimstone and flowers of sulphur, and surrounding it in the pan were 8 litres (about 8 quarts) of water.

The kettle stood in the water, therefore, to the extent of about half its height. In the water was placed a maximum and minimum thermometer. Suspended on a line in about the centre of the room were 116 samples of various kinds of cloth, the coloring matters of which had been determined by Dr. O. Grothe. The samples consisted of:

18 samples of all wool dress-goods (Sicilian cord) dyed with various combinations of logwood black, logwood brown, picric acid, indigo carmine, and Bordeaux.

8 samples of silk dress-goods (silk cord), which were also variously dyed with Bismarck brown, nigrōsine, alkali blue 2 B, Bordeaux, tropæline 3 O No. 2, and roacelline.

11 samples of domestic calicoes printed in many figures with catechu brown, logwood black, logwood blue, alizarine red, aniline yellow, and aniline blue.

12 samples of French satins also printed with aniline black, aniline yellow, alizarine red, indigo, logwood black, fiset wood, eosine, nigrōsine, Bordeaux, and alkali blue.

24 samples of Scotch gingham colored with different combinations of Bismarck brown, logwood

black, logwood blue, logwood brown, indigo, aniline blue, aniline yellow, alizarine red, alizarine rosa (tin salts), catechu brown, tropæline O (chrysoline), tumeric, tropæline O 4, fiset wood, and vesuvine.

24 samples of domestic cambrics variously printed with aniline blue, aniline yellow, logwood black, logwood blue, logwood brown, alizarine red, catechu brown, indigo, indigo carmine, naphthaline yellow, induline, and wood blue with chromine.

3 samples of oriental flannels dyed with induline, malachite green, and Bordeaux.

16 samples of domestic flannels dyed with Bordeaux, Victoria yellow, fuchsine, methyl violet, logwood black, alizarine red, induline, and brilliant blue (alkali blue 5 B).

Duplicate samples of each of these were retained for comparison. The sulphur was ignited with burning alcohol, and the room closed as soon as possible.¹

At 8.30 p. m. the room was opened.

Of the 6 lbs. of sulphur introduced 5 lbs. 9 oz. were burned; the remaining 4 oz. consisted of sulphur, sulphide of iron, and impurities. Owing to the reduction of temperature, it would not in any case be expected that the sulphur would be completely consumed.

Of the 8 litres of water introduced in the pan, 6.39 litres remained; 1.61 litres were, therefore, evaporated. The temperature of the water which, at the beginning, was 71° F., had risen to 158° F.

The samples of cloth were then arranged in series by the side of the original and exhibited to a number of persons, some of whom were experienced dry-goods salesmen and were really experts in judging the qualities of fabrics. The general opinion was that as to strength of fibre, no change in any case could be discerned; that as to color, one sample of Sicilian cord, colored with indigo and induline, and one sample of domestic flannel colored with brilliant blue (alkali blue 5 B) were very slightly faded; that one sample of oriental flannel colored with malachite green was not quite so bright; that one sample of oriental flannel and one sample of domestic flannel, each colored with induline, were somewhat faded; that with the remaining 111 samples there was no perceptible change. It is also observed that among the flannels only two were colored with induline, and that these, as above expressed, were the most affected, and that the only piece of woollen dress-goods which contained induline was the one which was very slightly faded.

Experiment No. 2, Room A.

In this experiment an attempt was made to reach the limit of sulphur which might be burned in the room. 32 lbs. 5 oz. of sulphur were placed in two kettles; one kettle with 16 lbs. 4 oz. placed in the tin pan as before, was surrounded with 8 litres of water, the other with 16 lbs. 1 oz. was placed in a

¹ Note.—As it has been asserted that sulphur fumigations will not even kill insects, we suspended in the room, before the larger window, a wire fly-trap containing about a dozen flies, another with six or eight ants, and another with half a dozen croton bugs (*Ectabia Germanica*). The time necessary for killing these insects was observed through the window. All flies were dead in 22 minutes; all ants in 24 minutes; and all croton bugs in 25 minutes.

wooden tub, and around it were 25 litres of water. In each case fully one-half of the kettle stood below the surface of the water. There was also suspended in the room, the same as before, a set of samples of the same fabrics from which those before used were taken, numbered the same, and for distinction marked with the letter "Y." The thermometer was also hung before the window, the sulphur ignited with alcohol and the room closed as before.

At 9 P.M. the sulphur ceased burning. On the following day the room was opened. The sulphur fumes had escaped so that it could be entered immediately. Of the 16 lbs. 4 ozs. of sulphur placed in one kettle, 6 ozs. remained; of the 16 lbs. 1 oz. placed in the other, 9 ozs. remained; or of the 32 lbs. 5 ozs., 31 lbs. and 6 ozs. were burned. The remaining 15 ozs. consisted of sulphide of iron, sulphur, and impurities. Since the room contained about 1500 cubic feet, the amount burned was nearly 21 lbs. per 1000 cubic feet. The water surrounding the kettle was found to contain much sulphuric acid. The amount consumed was largely in excess of that required to consume the oxygen of the air; and, as the sulphur was practically all consumed, the room must be considered as not sufficiently tight for the experiment.

The amount of sulphur required to consume completely the oxygen in 1000 cubic feet of air, as found by calculation, is 15,577 lbs. Of course, the low temperature and the highly diluted form the oxygen attains would both tend in practice to reduce greatly this amount.

Vallin, in his *Traité des Désinfectants* (p. 243), states that, experimentally, M. Martz was able to burn only 68 grammes per cubic metre, or about 4.2 lbs. per 1000 cubic feet; and that Czernicki was able to burn, in a large room, 300 grammes per cubic metre, or 18.7 lbs. per 1000 cubic feet. The room, in the latter case, was undoubtedly not tightly closed, as a comparison of his results with the theoretical amount will show. As to the effects on the fabrics in this experiment no difference could be noticed from that of the experiment before given. The samples of cloth in both experiments are arranged in convenient form with those of the original, and may be examined at the office of the Department of Health in Brooklyn.

Experiment No. 3, Room A.

It having been asserted that burning sulphur is not always effective in killing insects, and especially flies on the ceiling, another experiment was made to ascertain with more certainty whether flies are killed uniformly throughout the room, where the usual amount of 3 lbs. of sulphur per 1000 cubic feet is burned. To this end a window was placed next the ceiling by the upper front left corner of the room, and another by the diagonal corner of the left side next the floor. A fly trap with a number of flies was placed by each window next the ceiling and floor. Flies in traps were also placed at the upper back right corner and on the floor by the diagonal corner of the right side, one was also placed on the centre of the ceiling, and another on the window in the centre of the left side.

There were also a number of flies, perhaps fifty, confined loose in the room, going where they chose. An iron kettle, with 4 lbs. and 9 ozs. of sulphur, was placed in water in the large pan, the sulphur ignited, and the room closed as before. The flies next the ceiling, as observed from the window at the upper front left-hand corner were all dead in twenty-three minutes; those by the large window on the left side also in twenty-three minutes; those on the floor at the back left-hand corner were dead in fifty minutes; while some of the flies loose in the room, that had collected mostly by the small window in front near the floor, lived for one hour and forty-five minutes.

The sulphur fumes being heated evidently rose at first to the upper part of the room. The room was then immediately opened, the sulphur extinguished, and as soon as the room could be entered it was found that in all those portions of the room which could not be seen from the windows all flies were dead. It would seem, therefore, that when the flies are simply confined in a room not especially tight that they were able by the greater liberty afforded them to withstand the action of the sulphur fumes much longer than when confined to a particular locality in traps. By weighing the kettle and the remaining sulphur it was found that four pounds of sulphur were burned.

Experiment No. 4, Room B.

This room, provided with an ordinary window and door, measured as follows: 8 ft. 2 in. long, 6 ft. 2 in. wide, and 7 ft. 7 in. high, containing, therefore, 375 cubic feet. All crevices were thoroughly calked. In an iron pot were placed 16 lbs. 3 oz. sulphur. This was placed in the above described tin pan, and surrounded by nearly 10 litres of water. A maximum and minimum thermometer was hung on the wall showing a temperature at the beginning, of 76° F. In order to ascertain whether sulphuric acid would be formed, and whether the cloud of smoke arising from burning sulphur was due to the formation of this acid, or to sublimed sulphur, or both, a pane of glass 7 x 12 in. was thoroughly cleaned, wiped dry with a clean cloth and supported horizontally in the middle of the room by a clean glass support. The sulphur was ignited, the door thoroughly calked, and it being Saturday, P.M., it was left to take its course. The sulphur continued to burn for about 12 hours. When opened on Monday the atmosphere was not endurable. The temperature of the room had risen to 122° F. (50° C.), as shown by the maximum thermometer. Of the 16 lbs. 3 oz. sulphur introduced 2 lbs. 2 oz. had been burned, or at the rate of 5½ lbs per 1000 cubic feet. The pane of glass was found to be covered with a fine dew-like deposit, and its extremely sour taste indicated that it must contain sulphuric acid. This was carefully washed with distilled water into a clean flask. The washings unmistakably held sulphur in suspension. The amount of sulphur deposited on the pane of glass was determined after filtering from the H_2SO_4 solution by oxidizing with nitric acid, precipitating and weighing as $BaSO_4$. From this the amount of sulphur deposited on the glass plate was found to be 0.0014 gm. Since the surface of both

sides of the glass pane was 168 sq. in., and the surface of the ceiling and floor 14,504 sq. in., the amount of sulphur deposited on the ceiling and floor would be 0.1208 gm. Assuming that it would be deposited on the walls at the same rate, which may not be entirely the case, there would be deposited on the walls, ceiling and floor 0.3817 gm. or 5.88 grains of sulphur. This amount, though not large, is sufficient to account for the slightly dingy appearance of a room immediately after fumigation, and in part also for the cloud of smoke that arises from burning sulphur. The sulphuric acid in the filtrate as above obtained was precipitated as BaSO_4 after the addition of HCl and the BaSO_4 filtered and weighed; the H_2SO_4 , calculated therefrom was 0.0848 gm. The amount deposited on the ceiling and floor, as calculated from this amount deposited on the pane of glass, is 7.3210 gms., and assuming as above that it would be deposited at the same rate on the walls of the room there would have been formed 15.2 gms., or about 234 grains of sulphuric acid.

Experiment No. 5, Room B.

It being sometimes the practice to place the pot of sulphur on dry ashes instead of in water, the question now arises as to whether by so doing there is the same amount of sulphur burned, and also whether the same amount and relative proportion of sulphuric acid and sulphur are set free as found in the preceding experiment. In order to ascertain these points the following experiment was arranged.

The large tin pan heretofore used was nearly filled with ashes and placed near the middle of the room; on the ashes was placed an iron kettle with 8 lbs. of sulphur. An ordinary pane of glass, 9 by 12 in., was thoroughly cleaned and horizontally supported about 1½ ft. from the floor with a clean glass support. On the wall was also a maximum and minimum thermometer showing a temperature at the beginning of the experiment of 80° F. The sulphur was ignited with burning alcohol and the room thoroughly closed. On opening the room the following day, all smoke had subsided, but sulphur fumes were so strong that it could not be immediately entered. By weighing the pot of remaining sulphur it was found that 2 lbs. 7 oz. had been consumed, or at the rate of 6½ lbs. per 1000 cubic feet, which, as will be noticed, is ½ lb. per 1000 cubic feet more than was burned when the kettle was placed in water. Of course this is due to the fact that the water takes some heat from the kettle and its contents and thereby reduces its temperature. The thermometer on the wall showed a minimum temperature of 73° F. and a maximum temperature of 113° F. On the glass plate was the same dew-like deposit as before, but showing the presence of sulphur much more distinctly. The deposit was carefully removed with distilled water to a glass receptacle, the sulphur filtered therefrom, oxidized with nitric acid, and precipitated with barium chloride. By weighing the precipitate of BaSO_4 and calculating the sulphur, it was found that 0.0228 gramme of sulphur had been deposited on the glass plate. Calculating from this the amount deposited on the ceiling and floor would be 1.5301 grammes. If deposited on the

walls at the same rate the entire amount formed in the room would be 4.8352 grammes (74.5 grains). The sulphuric acid in the filtrate from the sulphur thus obtained was precipitated and weighed as BaSO_4 , from which it was ascertained that 0.1209 gramme H_2SO_4 had been deposited on the plate, or 8.1145 grammes on the ceiling and floor. Calculating as before the total amount deposited in the room would be 25.6397 grammes, or 394.85 grains.

A CASE OF HODGKIN'S DISEASE; WITH AUTOPSY.¹

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FOUNTAIN D., colored, aged 35 years, laborer in a tobacco factory, was admitted into my ward at the City Hospital March 3, 1885. He complained of a constant cough, profuse diarrhoea, and great weakness. He laid most stress on his excessive weakness, assigning this as the reason for ceasing work and seeking admission to the hospital.

On examination, the cervical glands on both sides and post-cervical glands were found enormously enlarged, hard, and painless. The neck was stiff, the head rotated with difficulty. The largest mass of glands was on the back of the neck, they elevated the occiput, depressed the chin, and rotated the head to the left, giving the patient a peculiar carriage and expression. The glands in the axillæ and groins were also enlarged, but to a much less degree than those of the neck, hard and painless. There was pain over the abdomen, but no glandular enlargement could be detected. The cough was due to bronchitis. The pulse was quick, feeble, and compressible. Anæmia was marked; the mucous surfaces of the lips, tongue, and conjunctivæ were very pale. Emaciation was excessive, especially of the trunk muscles.

The patient states that about two years ago he had a sore on the penis, followed by eruptions on the skin and sore throat. One year ago he was admitted into the hospital with some secondary manifestations, pains in legs and shoulders, stiff neck, and some enlargement of the glands on the back of the neck. Several months after this the glands about the neck began to enlarge, and he began to lose flesh and strength. None of the glands have ever suppurated. No scars are visible. His blood is pale and watery; examined under the microscope, the red corpuscles were pale, many crenated, and diminished in number; the white corpuscles were increased fourfold. The spleen was not enlarged. The case was diagnosed Hodgkin's Disease, or Pseudo-leukæmia.

Progress of the Disease.—The diarrhoea yielded to treatment; though constantly manifesting a tendency to recur. Cough proved very troublesome, was attended with dyspnea, especially at night and on exertion. There was a slight, irregular fever. No changes of importance for two weeks, when patient complained of great pain and stiffness in right arm and hand, and right leg; this gradually developed

¹ Read before the Medico-Chirurgical Society.

into partial motor paralysis of these members, more marked in arm than leg. Fever increased, with even-
ing exacerbation, very noisy and wakeful at night, appetite fair, and, with assistance, is able to be out of bed and move around the ward. Weakness increased, paralysis more marked, though not complete, no face or eye symptoms. Mind clear, except at night, when a tendency to noisy delirium was manifested. He was now so weak as to be confined to bed, fever continuous, pulse and respiration greatly increased in frequency. Marked pigmentation was now noticed on dorsal surfaces of hands and fore-arms, forehead, and various portions of the body, the black discoloration contrasting strongly with the dusky-gray, anaemic appearance of the rest of the body.

A few days before death a large bedsore developed over the sacrum; also, a severe stomatitis.

The patient died on April 11th, five and one-half weeks after ceasing work, and three weeks after the appearance of paralysis. He never complained of headache or photophobia. Great weakness and pains in arm and leg alone seemed to distress him. His morning temperature was seldom over 102° F., occasionally it would fall to normal, only to rise in the evening. The evening temperature frequently went to 104° F. The highest temperature occurred ten days prior to death, when it reached 105.2° F., with a pulse of 148, and respiration 48.

In addition to the usual tonic treatment, the patient received increasingly large doses of iodide of potash, hoping that possibly it might do good, as syphilis seemed to be the cause of the disease.

Eighteen hours after death, I made the autopsy. The cervical and post-cervical glands were removed; they were firm, lobulated, reddish-gray in color, in places there was evidence of periadenitis.

On opening the thorax, the mediastinal, cardiac, and bronchial glands were greatly enlarged, very firm, yellowish-white in color. The pressure of the glands probably caused the bronchitis and dyspnea.

The lungs were healthy, except the base of the right lung, in which was a firm white nodule about the size of a marble. The pericardium contained four ounces of clear serum; the heart was pale and flabby. The liver contained numerous small white nodules. The spleen weighed nine ounces, and contained several soft, white nodules about the size of a pea. The kidneys were not affected. The mesenteric glands were greatly enlarged, many of them being very soft, and on section, revealed thick, creamy matter. The retroperitoneal glands were also greatly enlarged, extending to the pelvis. The suprarenal capsules were healthy. The great size of the retroperitoneal glands causing pressure on the solar plexus probably caused the pigmentation of the skin. The inguinal and axillary glands were not involved to the same extent as the glands in the other regions mentioned.

On removing the calvarium, evidences of slight meningitis were discovered. The brain, on section, appeared pale and bloodless; otherwise it was healthy.

LOUISVILLE, KY.

MEDICAL PROGRESS.

CHRONIC ALCOHOLISM.—Messrs. Dujardin-Beaumetz and Audigé have communicated to the Institute the result of their researches on chronic alcoholism. From June, 1879, to July, 1883, eighteen pigs were experimented upon, each of them with a different sort of alcohol, such as ethylic and methyl alcohol, alcohol prepared from corn, beet-root, and potatoes (pure and impure), absinthe, and tincture of absinthium. These were given daily with the food, in the dose of one to one and a half grammes of alcohol, two grammes of absinthe, and two centigrammes of the tinctura absinthii for one kilogramme of the weight of the body. The symptoms of intoxication by alcohol were sleepiness and prostration, vomiting of bile and glairy mucus, diarrhoea, and sometimes intestinal hemorrhage, dyspnoea, tremor and incomplete paralysis of the hind legs. Some animals which were killed or died during the experiment were examined by Prof. Cornil. He found congestion of the digestive tube, sometimes causing hemorrhage, congestion and inflammation of the liver, but without cirrhosis, congestion of the lungs, and finally, atheroma of the large bloodvessels, especially the aorta. The animals were not emaciated, but presented numerous extravasations of blood into the subcutaneous and muscular tissues. Impure alcohol had a much more rapid and deleterious influence than rectified alcohol. The symptoms caused by absinthe and tinctura absinthii were excitement, and spasmodic contractions of the muscles and cutaneous hyperesthesia, but true epilepsy was never noticed.—*British Medical Journal*, August 22, 1885.

REMEDIAL EFFECT OF SUBNITRATE OF BISMUTH IN FETID PERSPIRATION OF THE FEET.—VIEUSSE, in *Le Moniteur Thérapeutique*, June, 1885, recommends the subnitrate of bismuth in the treatment of fetid perspiration of the feet, and cites the following conditions in which the remedy is successfully applied:

1. Profuse perspiration of the feet, under whatever form presented, whether manifested in a simple hypersecretion of sweat, or accompanied by pain, or manifested in condition of abundant and fetid transpiration, is easily cured by the application with slight friction of subnitrate of bismuth upon the diseased parts.

2. In opposition to the opinion generally embraced, according to which the suppression of exaggerated perspiration may produce numerous accidents of metastasis, observation shows that the cure of this affection has not been followed by unfavorable results, and that if these are observed they should be attributed to other methods of treatment hitherto employed.

3. In the cure of this disease, subnitrate of bismuth appears to exercise a purely local action, rendering the superficial cuticular structures firmer, and more resistant.

The remedy, perhaps, exerts an action also upon the sudoriparous glands and sebaceous follicles, changing the quality and quantity of their products, and possibly, as a result of the changes produced in the part with which it comes in relation, modifies even profoundly the capillary circulation.

4. In certain cases the remedy suppresses only temporarily the profuse perspiration of the feet, but causes the fetid odor, as well as the pain, which is the consequence of the exaggerated secretion, to disappear permanently.—*Rivista Internazionale di Medicina e Chirurgia*, May and June, 1885.

ON THE SIGNIFICANCE OF OSSEOUS LESIONS IN THE DIAGNOSIS AND TREATMENT OF INHERITED SYPHILIS.—A paper on this subject, by DR. R. LOMER, of Berlin, appears in the *Zeitschrift für Geburtshilfe und Gynäkologie* (Band X. Heft 2). It refers to the disease of the bones described by Wegner. Dr. Lomer holds that the presence of these changes in a well-marked form is proof of syphilis; and, applying this test, comes to the conclusion that the large majority of cases of premature labor are due to this disease. General practitioners, in Dr. Lomer's opinion, know very little about these bone lesions. They are to be demonstrated by exposing the femur and making a longitudinal section of it. In a healthy bone the junction of cartilage and bone is a simple line, either straight or undulating, but sharp and well-defined. In a syphilitic bone it is a broad layer, from which irregular processes project into the cartilage. The epiphysis is either quite loosened, or there are deep fissures in the bone below the line of ossification. In some cases these changes can be easily seen with the naked eye, but in others they may be so slight as to need microscopical examination of carefully prepared sections. Although this disease indicates syphilis, yet a normal condition of the bone is not proof of the absence of syphilis. Dr. Lomer puts before his readers the following generalizations, based on the examination of forty-three fetuses which had died in utero. When the bone disease is well-marked, the liver and spleen are abnormally large. It makes no difference in the degree of the changes present, whether the syphilis is derived from one or both parents, whether in the parent the disease is one year old or ten, whether secondary symptoms have persisted or not, whether the parent has been treated or not, or whether the child be large or small. Syphilitic fetuses differ in appearance from non-syphilitic. The latter are brown and mummified, the former flesh-colored and more edematous. In the non-syphilitic the mother can commonly assign a date for the infant's death, and the weight of the fetus corresponds to the period indicated by her statement. This is not the case with the syphilitic; and in them the placenta is commonly unusually heavy in proportion to the weight of the fetus.—*Medical Times* (London), August 22, 1885.

TREATMENT OF PNEUMONIA BY LARGE DOSES OF DIGITALIS.—DR. CHRISTE BUCILO, in reviewing a clinical study of the effects of large doses of digitalis in the treatment of pneumonia, made by M. PETRESCU, in the military hospital of Bucharest, gives a table of eight cases treated by the latter—all successfully—and appends the conclusions reached by the author concerning the efficacy of the drug in this disease. Dr. Petrescu, in a review of 350 cases treated by this method, shows that the duration of the disease was shortened, and in every case the intensity of the fever was progressively diminished, while the tolerance of enormous doses of digitalis was also attained. His conclusions are:

1. That digitalis in pneumonia produces a certain and immediate antiphlogistic effect when administered in therapeutic doses.

2. The therapeutic dose in this disease is from 60 to 90 grains of the leaves, during twenty-four hours, for a limited number of days.

3. The treatment of pneumonia by digitalis is up to the present time the only method which has reduced to a minimum the mortality consequent thereto.—*Le Progrès Médical*, August 15, 1885.

REMOVING MICROBES FROM WATER.—PROFESSOR FRANKLAND has, we read in the *Journal of the Society of Arts*, recently made a series of experiments on the relative efficiency of filtration, agitation with solid particles, and precipitation, as a means of removing micro-organisms from water. His method was to determine the number of organisms present in a given volume of the water, before and after filtration. The filtering materials were green sand, silver sand, powdered glass, brickdust, coke, animal charcoal, and spongy iron. These materials were all used in the same state of division, being made to pass through a sieve of forty meshes to the inch. Columns six inches in height were used. It was found that only green sand, coke, animal charcoal, and spongy iron wholly removed the micro-organisms from the water filtered through them, and that this power was lost in every case, after the filters had been in operation a month. With the exception of the animal charcoal, however, all these substances, even after being in operation for a month, continued to remove a very considerable proportion of the organisms present in the unfiltered water; and in this respect coke and spongy iron occupied the first place. Water containing microorganisms was also agitated with various substances in the same state of division as above mentioned, and after subsidence of the suspended particles, the number of organisms remaining was determined. A gramme of substance was in general agitated with 50 cubic centimetres of water for a period of about 15 minutes. It was found that a great reduction in the number of organisms could be produced in this way; and the complete removal of all organisms by agitation with coke is especially to be remarked. Precipitation by "Clark's process" also showed that it affords a means of greatly reducing the number of these organisms in water. Dr. Frankland concludes from his experiments, that, although the production in large quantities of sterilized potable water is a matter of great difficulty, involving the continual renewal of filtering materials, there are numerous and simple methods of treatment which secure a large reduction in the number of organisms present in water.—*British Medical Journal*, August 15, 1885.

PREGNANCY AFTER DOUBLE OVARIOTOMY.—SCHATZ, in the *Centralblatt für Gynäkologie*, records the case of a woman who became pregnant after the operation of double ovariotomy. The woman for a long time had suffered abdominal pain, and the operation was performed February 20, 1880. The left ovary was found to be in a condition of fibroid degeneration, and was completely removed together with the external portion of the corresponding Fallopian tube. The right ovary also showed signs of cystoid degeneration, and was re-

moved, with the exception of a small band—at the most only one-twelfth of an inch wide. The right Fallopian tube remained intact. Cure resulted without incident, save the occurrence of an abscess formed in the path of one of the sutures. A month after operation violent pain in the hypogastrium and thigh was experienced, in lieu of the menses; but finally, on June 20, menstruation occurred and continued up to the time of the patient's marriage, April 23, 1884. The symptoms of pregnancy were well marked at the beginning of September, and accouchement at term occurred May 12, 1885, after thirty-six hours' labor.

LICENSES TO PRACTISE MEDICINE IN JAPAN.—The *Supplement to the Transactions of the Sei-i-Kwai* for May, 1885, contains a copy of the regulations for the examination of candidates for licenses to practise medicine. The Minister for Home Affairs is to hold examinations twice yearly, six months' notice of the time and place being given. At the time of the examination, he is to appoint an examining committee selected from hospital physicians, or from physicians and chemists of known medical knowledge; a dentist may also be appointed in the case of examinations for licenses in dentistry. A manager is to be appointed to superintend the examinations. The examinations for the license to practise medicine are divided into two parts, unless the candidate can take the whole examination at once. For the license in dentistry, there is but one examination; the subjects being Dental Anatomy and Physiology, Dental Pathology and Practice, Dental Medicine, Dental Mechanics, and a practical examination. The subjects of the two examinations for the license to practise medicine are: first, Physics, Chemistry, Anatomy, and Physiology; second, Theory and Practice of Surgery and of Medicine, *Materia Medica*, Ophthalmology, Obstetrics, and Clinical Observation. A course of study of not less than a year and half's duration must be pursued before the first examination, and an additional course of like duration before the candidate can be admitted to the final examination. The answers to the questions are to be given in writing; but, under certain circumstances, they may be given orally. Candidates who pass are to receive a certificate, attested by the manager and the examining committee. Rejected candidates are not admitted until after a lapse of at least six months. The fees are, for the primary examination, three *yen* (about 11 shillings); for the final examination, five *yen*; and for the examination for license in dentistry, five *yen*. The fees are not to be refunded in case of inability to attend or complete the examination.

—*The British Medical Journal*, August 29, 1885.

TUBERCULAR INFECTION THROUGH SEXUAL INTERCOURSE.—**FERNET**, at a meeting of the Société Médicale des Hôpitaux, January 7, 1885, in a paper upon the possibility of the occurrence of tubercular infection through sexual intercourse, summarized his views as follows:

1. Primitive genital tuberculosis may probably be caused by direct contagion in sexual intercourse.
2. The indolent blenorragic discharges sometimes observed in certain men, subsequent to sexual relations, especially when not consecutive upon true blenorragia, should be regarded with suspicion. Some of the discharges appear to be of a tubercular nature. The same

may be said of certain forms of leucorrhœa in woman. A search for the bacillus tuberculosis must decide the nature of these discharges.

3. Sexual relations with subjects affected with genital tuberculosis expose to direct contagion, and present a risk which it is wise to avoid.

4. A principal danger of genital tuberculosis is the risk of general secondary infection. The cure of such genital tuberculosis should be attempted by all known remedial agencies, and even by surgical interference.—*Revue des Sciences Médicales*, July, 1885.

THE CUMULATIVE ACTION OF DIGITALIN AND HELLEBORIN.—M. VAN DER HEIDE, in endeavoring to confirm the cumulative action of digitalin and helleborin by experiments upon animals, has reached the following conclusions, some of which favor, while others oppose the reality of such action in these drugs. He found

1. That with very minute doses (one-eighteenth of a grain) administered in succession at intervals of considerable length (one day), he has succeeded in killing dogs of large size.

2. A dose not fatal under ordinary circumstances frequently suffices to kill animals already under the influence of small doses for a considerable period.

3. The slowing of the pulse persists a long time after the administration of the final dose, as has already been noted by Sandras (1883) concerning digitalis.

4. The maximum effect upon the heart is obtained subsequent to the administration of the final dose when several equal doses are administered at greater or less intervals.

5. Toxic effects which a given dose is unable to produce are frequently observed when such dose is repeated a sufficient number of times, and at sufficiently great intervals.

On the other hand, Van der Heide has observed

1. That toxic symptoms disappear under the prolonged administration of digitalin or helleborin in uniform doses.

2. That doses which at first strongly influenced the frequency of the heart, lost much of their effect according to the length of time during which the experiments were prolonged.—*Gazette Médicale de Paris*, August 22, 1885.

HYSTERIA IN MALES.—At a recent meeting of the balneological section of the Gesellschaft für Heilkunde, Berlin, Dr. JOSEPH, of Landeck, read a paper upon this subject, describing two cases. An apprentice in a house of business, "of good family," had an attack of acute rheumatism when eighteen years of age. Convalescence was protracted, and followed by great distention of the stomach, hiccup, and general clonic spasms of the voluntary muscles, forcing the trunk suddenly into all manners of attitudes, and causing obstruction to deglutition, etc. After treatment at a hydropathic establishment, all these symptoms disappeared, but were followed by ptosis and right motor hemiplegia, with hyperesthesia on both sides of the body. The convulsions returned after the paralytic symptoms had abated. Dr. Joseph then examined the patient, who appeared to be robust, muscular, and ruddy complexioned. He stared suspiciously at bystanders, and was very excita-

ble. He walked slowly, and with the aid of a stick, dragging the right foot. Percussion of the thorax caused opisthotonus; the six lower dorsal vertebrae were especially sensitive. The appetite had become very good, and globus was frequent. The bowels remained constipated for days or even weeks. No history of sexual abuse of any kind could be traced. After ten weeks of hydropathic treatment, he left Landeck apparently cured. It was found that the patient's grandfather, who had recently died, aged 78, had suffered for fifty years from hysterical fits precisely similar to those observed in young women.

The second case was that of a robust horse-dealer, aged 38, who had a flourishing business in Prussian Poland. He had served for three years in a German cuirassier regiment, and was father of a large family. Four years before consulting Dr. Joseph, he caught cold, and aphonia followed. A little later, clonus was complained of, and then he began to have convulsive attacks, without loss of consciousness, but with loss of power of speech. These attacks were often followed by vomiting. Then, when he applied to Dr. Joseph, he became subject to globus, hoarseness without objective laryngeal symptoms, and great mental irritability. The physician witnessed a fit. The patient, a very tall, strong man, lay stretched out in bed, with clonic convulsions of all his extremities; he was quite conscious, but could not speak. There was constant hyperesthesia over the interscapular region, the lower cervical and upper dorsal vertebrae, but not in the iliac region. The patient was relieved by hydropathic treatment. There was no family history of hysteria or epilepsy.—*The British Medical Journal*, August 29, 1885.

INFECTIOUS PERITONITIS IN VIRGINS.—DR. SNYERS has described in the *Annales de la Société Med.-Chirurg. de Liège (Journal de Méd. et de Chir. Prat.)*, 1884, two interesting cases, which seem to show that the virus of erysipelas can cause, in women who have never had intercourse, an acute form of peritonitis, similar to that observed in puerperal cases. A young woman (a virgin), aged 18, was suddenly seized with symptoms of acute peritonitis five weeks after a servant in the house had been taken ill with erysipelas of the face; death ensued in thirty-six hours. Shortly afterwards, the brother of the young woman had an attack of erysipelas on the arm; this did not cause much anxiety at the time; but, a fortnight later, the second sister, aged 20 (also a virgin), was seized with the same symptoms as the first, and died in less than two days. At the *post-mortem* examination, Dr. Firket failed to discover any local cause by which the origin of the inflammation might be explained. The spleen was much swollen, and the blood had the same appearance as in cases of infectious diseases.—*The British Medical Journal*, August 29, 1885.

REMOVAL OF TUMORS OF THE BLADDER.—DR. ANTOINE SABASTIER, at the conclusion of a critical review of the operation for removal of vesical tumors, founded on observations made upon forty-seven cases removed either by hypogastric or perineal section, summarizes his views concerning the condition and the indications for operation as follows:

1. Every tumor of the bladder having almost certainly

a fatal prognosis, surgeons should be impressed with the necessity of early operation when the disease exists.

2. When the diagnosis is uncertain, membranous urethrotomy should be performed as an exploratory operation.

3. Small tumors developed over the trigone of the bladder, and of a benign nature, seem best removed, in view of their radical cure, through the perineum by membranous urethrotomy, the median or lateral operation.

4. Large tumors of the bladder, multiple and extended, and situated in the superior vesical hemisphere, and of a malign nature, should be operated on by the hypogastric section.

5. In those cases where radical cure is impossible, incomplete ablation almost always affords considerable relief. Such palliative operations should be preferably done in the suprapubic region and a permanent urinary fistula established.—*Revue de Chirurgie*, August, 1885.

COCAINE IN SEA-SICKNESS.—In a preliminary report on some observations upon "cocainum muriaticum," DR. MANASSEIN, of St. Petersburg, gives an interesting account of the employment of the drug in sea-sickness (*Berl. klin. Wochenschr.*, August 31st). He had read of its value in uncontrollable vomiting of pregnancy, and thought it might be useful in sea-sickness. He, therefore, went this summer on a sea voyage in order to test its efficacy. Among his fellow passengers were two, a man and woman, who were especially prone to the malady. He administered to each of them every two or three hours a teaspoonful of the following solution: Muriate of cocaine 0.15, rectified spirits of wine (in sufficient quantity), and distilled water, 150.0, beginning the administration on starting. That it had a prophylactic effect seemed clear, for in spite of very rough weather for a period of forty-eight hours, both the individuals were for the first time in their lives free from sickness, and enjoyed a very good appetite the whole time. To a child six years old, who began to be attacked with sea-sickness on rising in the morning, the treatment was so effectual that it was able to play about during the day in spite of the storm. The child took one teaspoonful in two doses during the first half-hour, and then half a teaspoonful every three hours. Another case was that of a girl, eighteen years of age, who had been sick for twenty-four hours before the drug was given. The case being a severe one, she had a double dose every half-hour, with "truly magical effect;" for after the second dose the patient was able to assume a half-sitting posture, and after the sixth dose she jested and began to complain of hunger. During the rest of the voyage she remained well, although there was much rolling of the vessel. Similar good results attended the use of the drug in three milder cases; and had it not been that his supply ran short Dr. Manassein would have been able to make more extended observations. Still, from the experience of these few cases he thinks it justifiable to infer that in the drug we have a certain and harmless remedy against sea-sickness. In the same communication he mentions that he had found "cocainum muriaticum" of great service in arresting the collapse of two severe cases of simple cholera, and thinks it desirable to try its action in cases of Asiatic cholera.—*Lancet*, September 5, 1885.

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SATURDAY, SEPTEMBER 19, 1885.

THE CLINICAL SIGNIFICANCE OF PEPTONURIA.

ONE of the first to avail himself of the accurate method of Hofmeister, for the determination of peptonuria, detailed in a recent issue of THE NEWS, was Maixner. His most important conclusion was that the presence of peptone in the urine points to suppuration and the simultaneous disintegration in the economy of pus corpuscles.

A little later, v. Jaksch published the result of his investigations on peptonuria, based on the study of some hundreds of cases. He confirmed in general Maixner's earlier conclusions, he never once found peptonuria in any of the acute infectious diseases—typhoid, typhus, and intermittent fevers, measles and scarlatina,—and out of three cases of phosphorous poisoning which he studied, it occurred in one. He also found it in scorbutus attended with disintegration of colorless corpuscles, and called it "haemogenous" peptonuria. In 1882, Poehl, besides finding peptonuria in the last stages of the inflammatory process, asserted that all albuminous urine of acid reaction contains peptone, which diminishes or entirely disappears when it becomes neutral or alkaline. On the contrary, in acid urine, non-albuminous but peptone-holding albumen appears when the reaction becomes neutral or alkaline.

In 1884, Fenomenow, in Russia, published a paper in which, besides confirming Maixner's results, he called attention to the possible origin of peptone from albumen, in which, first confirming the experiments of Eichwald, made as far back as 1864, he showed, also, that such morphological constituents of the urine as pus, blood and epithelium, exerted, to a certain degree, a fermentative action

upon albuminous urine of acid reaction, resulting, when they are abundantly present, in the appearance of peptone. Indeed, he asserted that peptone is only found where these cellular elements are abundant. In this way Fenomenow explained the excretion of tube casts, which, firmly seated in the uriniferous tubules, are only cast out when they become peptonized on their external surfaces. In 1884, also, Maixner described what he called the "enterogenous" form of peptonuria occurring in cancer of the stomach and typhoid fever, where the peptone of digestion is absorbed directly into the circulation, and passes thence into the urine.

Quite recently, PACANOWSKI, in the *Zeitschrift für klin. Med.*, 9 Bd. 5 Heft, August, 1885, has published the results of the study of this matter in a large number of cases of disease. He used both tannic and phosphortungstic acid for precipitating the urine, and considers the latter more convenient and the method shorter. To remove albumen, acetate of iron is to be added only as long as abundant flocculi are precipitated, not, as Hofmeister says, until the fluid becomes permanently red, for this seldom occurs, the color remaining brownish or reddish-gray. Further, as to the decomposition of the phosphortungstic precipitate with baryta, there appears at the beginning of the rubbing a green color which should pass over into yellow. Should this not occur after much rubbing, more baryta should be added and the rubbing continued. Only when the precipitate is yellow has complete decomposition taken place. Then after adding a little water and boiling, the entire precipitate falls, and the supernatant fluid remains bright yellow. To this he applied the "biuret" test already described in these pages.

Pacanowski's observations covered 211 cases of disease, and included 810 urine analyses, in 350 of which he used the tannin method of precipitation. In 36 cases of typhoid fever it occurred twenty-five times; in 2 cases of typhus, once; in 2 cases of variola, twice; in 2 of scarlatina, twice; in 4 of intermittent fever, once; in 4 of miliary tuberculosis, twice; in 3 of erysipelas, three times; in 6 of acute rheumatic arthritis, six times; in 2 of chronic arthritis, once; in 25 of pulmonary phthisis, eleven times; in 5 of chronic pneumonia, twice; in 7 of croupous pneumonia, seven times; in 6 of purulent pleurisy, four times; in 2 of embolism after insufficient mitral valve, twice; in 3 of angina of the fauces, once; in 1 of carcinoma of the esophagus, once; in 3 of carcinoma of the stomach, three times; in 2 of carcinoma of the rectum, twice; in 1 of perityphlitis, once; in 5 of catarrhal jaundice, three times; in 2 of hypertrophic cirrhosis of the liver, once; in 3 of cancer of the liver, three times; in 5 of parametritis, four times; in 2 of cerebral apoplexy, twice; in 1

of parotitis, once; in 2 of abscess, once; in 1 of ecchymosis after trauma, once; and in 1 of muscular rheumatism, once. He found it absent in 1 case each, of diphtheritic angina, fibrinous pericarditis, ulcer of the stomach, purulent peritonitis, acute nephritis, gonorrhœal orchitis, hemiplegia, epilepsy, anaemia—probably pernicious, diabetes mellitus, external otitis, ambustura and necrosis; in 2 cases of serous pleurisy, chronic endometritis, myoma of the uterus, chronic leptomeningitis, tabes dorsalis, leukæmia, gonitis fungosa, sarcoma of the neck and superior maxilla; in 3 each of measles, insufficient mitral valve, chronic gastritis, acute enterocolitis, cholelithiasis, and cyst of the ovary; in 4 each of chronic nephritis, and neuralgia; and 5 each in chronic bronchitis, chronic myelitis, and hysteria.

He further divides the cases into acute and chronic, including in acute peptonuria the various forms of inflammatory (suppurative) process of the acute infectious diseases. In the chronic are included carcinoma, pulmonary phthisis, and diseases of the liver.

In the case of typhoid fever, as to which the results of Maixner and v. Jaksch were at variance, Pacanowski, agreeing with Maixner, found peptonuria tolerably frequent, almost constant at the beginning of the period of defervescence, or a few days earlier, and this in the milder, as well as the more serious cases. Indeed the reaction was at times more distinct in the former. So long as continuous fever was present, so long as the typhoid symptoms were strongly expressed, peptonuria could not be demonstrated. Nor was it found in those fatal cases in which there was no suppuration. In one case, however, accompanied by phlegmonous abscess, there was peptonuria, but after incision into the abscess, and removal of the pus, peptonuria disappeared. In cases of relapse, if there was peptonuria in the primary disease, it reappeared in the relapse.

What has been said of the time of appearance of peptonuria and its relation to the febrile process in this disease is true of the other infectious diseases, including miliary tuberculosis.

In explanation of this very interesting condition in typhoid fever, Pacanowski does not accept either of the more recent views of Maixner. That of Gerhardt, that it is due to the action of high temperature upon the albumen conversion of the blood plasma, has long been laid aside. Maixner first, with Schuelzen and Riess, ascribed peptonuria to an insufficient oxidation of the nitrogenous and non-nitrogenous substances which normally result from the splitting up of albumen. As a consequence of this, albumen does not pass over into the usual products, urea, uric acid, etc., but retains a stage of less complete oxidation. Thus it is that we have leucin and tyrosin in the urine in acute yellow atrophy of the liver. This view, entirely theoretical, is not sustained

by facts, according to Pacanowski, for in typhoid fever there is not an inhibited, but rather an increased oxidation of the principles of the body.

The more recent view of Maixner, also rejected by Pacanowski, ascribed peptonuria to the abundant exfoliation of epithelium and the presence of albuminous intestinal juices, together with deficient supply of nutritive matter.

The action of the lower organisms upon albumen has also been suggested in explanation, but if this is the case, says Pacanowski, why is not a proportionate degree of peptonuria present in miliary tuberculosis and in fatal uncomplicated typhoid fever?

Pacanowski himself thinks we need not go further than the local phenomena of inflammation which are found in some places, and, in some form, in all the infectious diseases in which peptonuria is present. Pre-eminently is this the case in typhoid fever, where we have, at first, an inflammation of the entire intestinal tract, including a small-celled infiltrate of the follicles and mucosa. Later we have ulceration of the solitary glands and Peyer's patches, necrosis and separation of slough, followed, in favorable cases, by healing with a smooth cicatrix, and the resorption of the deeper layers of the intestinal infiltrate, as well as that of the mesenteric glands. Thus are furnished the very conditions which Maixner in his first paper showed to be responsible for peptonuria in simple exudative processes.

That peptonuria does not occur during the period of ulceration in typhoid fever, but rather at the beginning of the process of healing, is explained by the fact that ordinarily the typhoid ulcer has, after separation of the slough, a clean, smooth bottom in which are wanting the proper conditions of absorption, while, in addition to this the products of the sloughing process are promptly carried away by the diarrhoea. This agrees with the fact long known, that on exposed surfaces the absorption of the peptone originating from the disintegrating pus cells does not freely take place as long as the products of cell disintegration can pass easily away. But in closed cavities, as in parametritis and articular rheumatism, and in parenchymatous organs, we have conditions favorable to the absorption of the exudate.

At the beginning of the healing process in typhoid fever, we have the conditions favorable to peptonuria. The mucous membrane of the ileum, richly infiltrated with cells, the muscular and subserous layer as well as the cell-infiltrated gland apparatus, are returning rapidly to their normal state, and the cellular elements of the infiltrate as rapidly undergo disintegration, furnishing the peptone for absorption. Peptonuria in milder cases of typhoid is explained by the absorption of the cellular infiltrate which is present even where there is no ulceration, and, in other acute infectious diseases, where there is abund-

ant cell infiltration, as in Pacanowski's two cases of scarlatina, where there were angina and swelling of the cervical glands, the same explanation holds; so, too, in that of smallpox, where the pustules dried on the surface; in intermittent fever, where there was reduction in the size of the spleen by the action of quinine; in all these there was peptonuria. On the other hand, in the three cases of measles where there were no such conditions, there was no peptonuria. Furthermore, peptonuria occurred in cases of non-inflammatory hemorrhagic exudate, in which it may be ascribed to the absorption of effused blood. Such were two cases of cerebral hemorrhage, and one of contusion of the thigh.

The study of chronic peptonuria, in phthisis, pneumonia, and cancer, would seem to show that, except in cases of the last, it is everywhere due to the same cause—the disintegration and absorption of cellular elements.

In phthisis it was more particularly in the earlier stages, where the dulness of the apex was slight, and cavities were still absent. Where there was extensive loss of lung tissue, and even in simultaneous ulceration, there was no peptonuria, and it was altogether independent of high temperature.

In cancer of the gastro-intestinal tract, where peptonuria is common, the primary explanation of Maixner, that it is due to the absorption, by the ulcerated surfaces, of the peptone of digestion, as well as that produced by the disintegration of the new formation itself, still holds good; but in cancer of the oesophagus, rectum, and uterus we must have recourse to the disintegration of the new-formed cellular tissue as the sole source. Such was the case in a decided degree in one case of cancer of the uterus in which there was peptonuria, while there was none in the second, where there was no such disintegration.

Peptonuria, accompanying cancer of the liver, however, requires a different explanation, and its almost invariable association with undoubted disease of the kind compels the theory that in health the liver has something to do with the conversion of peptone into albumen, and that in cancer this is interfered with. Such a view is sustained by the experiments of Plösz and Gyergyai, Hofmeister, and Seegen. Changes in the liver must be sufficiently great to influence this normal office. Should this be the case in other than cancerous disease, peptonuria may also occur, as is actually the case in acute yellow atrophy and phosphorous poisoning.

In nephritis, Pacanowski fails to confirm the statement of Senator, Petri, and Poehl, that albuminuria and peptonuria coexist, having failed to find it in four cases of chronic and one of acute nephritis. In this he agrees with Maixner. Nor could he confirm the assertion of Fenomenow, that in urine contain-

ing numerous morphological elements, including pus and blood-corpuscles and tube-casts, peptone is present; nor that of Poehl, that urine containing peptone, but no albumen, loses the former on becoming alkaline. Experiments with urine allowed to decompose, for the direct purpose of determining this, showed the continued presence of peptone, although the biuret reaction was weaker.

It will be seen, from the above quite full exposition of the subject, based upon the paper of Pacanowski, no diagnostic or prognostic value can as yet be associated with peptonuria, its presence being simply a part of the clinical history of the diseases with which it is associated. It will be seen, too, that it is a tolerably frequent condition; and the statement of Dr. George Johnson, already quoted in these pages, that it is rare, must be erroneous. The chief importance at present attaching to its study would seem to be not so much the determination of its presence as the avoiding of confounding the latter with albuminuria, an object which cannot be said, as yet, to be satisfactorily attained.

DIAGNOSIS OF THE POSITION OF THE HEAD IN LABOR BY TOUCHING AN EAR.

WHILE in the majority of cases of labor the obstetrician can make an accurate diagnosis of the position of the head by means of the sutures and fontanelles, there are some cases where he may be in doubt, or the landmarks referred to may fail in consequence of a large caput succedaneum. In the latter case it is usually recommended to introduce one or more fingers so as to touch the part of the head above the caput succedaneum where the sutures are unobscured by the swelling.

For the diagnosis of the position when great swelling of the presenting part, hiding the fontanelles and sutures, has occurred in consequence of protracted labor, DR. LOMER, of Hamburg, in a recent number of *Centralblatt für Gynäkologie*, recommends the use of the hand, especially when the forceps is to be applied, in order to feel an ear. The anterior and the posterior margin of the external ear differ so strikingly in shape, that if an ear can be felt—and if there be room for the introduction of the blades of the forceps there is room for this use of the hand—it is very easy to know the position of the head. He states that he has found this method so practical that in all his later forceps operations amounting to 109, he has resorted to it, having given up the attempt to locate sutures and fontanelles when the swelling referred to has occurred.

Lomer has revived an old practice. Smellie, for example, in the second edition of his *Midwifery*, London, 1752, says in his rules for applying the forceps: The position of the head is distinguished by feeling for one of the ears, the fore or smooth

part of which is towards the face of the child ; if it cannot be ascertained by this mark, the hand and fingers must be pushed further up, to feel for the face, or back part of the neck ; but, if the head cannot be traced, the observation must be taken from the *fontanelle*, or that part of the *cranium* where the lambdoidal suture crosses the end of the *sagittal suture*. It is also seen from this extract that Smellie ended the means of diagnosis with that with which most ob-tetricians to-day begin theirs.

The late Dr. McClintock, in one of his annotations found in the Sydenham Society's edition of Smellie, remarks. "I am sure there is often too much diffidence about using the *hand*, as pointed out by our author, for the purpose of acquainting ourselves with the condition of the pelvis, and the relative position occupied in it by the foetal head."

ANTISEPTIC OBSTETRICS IN CITIES.

THE most important question in obstetrics at present is as to the use of antiseptics. Are these required in all cases of parturition, and if so, how are they to be used? May one rule be made for the direction of the obstetrician who practises in the country, and another for the city practitioner? The former will be very slow to subject a woman in labor or after labor, to antiseptic vaginal injections. Many a country physician has never had a case of puerperal septicæmia in his practice, or, at most, has only met with a few isolated cases of the disease, and it is natural for him, having got on so well without the precautions referred to, to reject their use in the future. While he may have reason founded upon his experience for this, his brother practitioner of the city has not so good an excuse for following his example. Bearing upon this question we desire to make brief reference to a work by DR. DEBACKER, upon the *Necessity of Antiseptic Accouchement in Populous Centres*, recently issued in Paris, of which we find a notice in the *Archives de Tocologie* for September.

Dr. Debacker states that if a woman takes baths in the latter part of pregnancy, she should add a solution of corrosive sublimate to the water, and also while taking the bath have a perforated tube placed in the vagina, so that the water may pass up to the neck of the womb. If she does not bathe, she ought to take a vaginal injection morning and evening of a solution of sulphate of copper, one part to one hundred. During labor a disinfectant vaginal injection is made, and phenic oil is used upon the finger before the latter is introduced into the vagina.

After the labor has ended and clots have been expelled, an irrigator with a vaginal canula well oiled and disinfected is used to throw into the vagina from half to a whole quart of a solution of sulphate of copper one part to one hundred ; as the os uteri is

now largely open, there is really a washing of the uterus thus made. The injections are repeated morning and evening.

Debacker holds that the antiseptic method ought to be universally adopted in all populous cities, that it alone offers almost a complete security in labor, and that should puerperal accidents occur, it is the remedy which, combined with those suggested by therapeutics, can alone effect a cure.

THE profession is again under obligations to the enlightened liberality of the National Government and to the intelligent zeal and indomitable industry of Surgeon Billings for the sixth volume of the *Index Catalogue of the Library of the Surgeon-General's Office*. This volume, which has just been issued, contains 1051 double-column pages, extending from "Heostic" to "Insfeldt," and includes 7900 authorities and 49,880 subject-titles, and embraces some very large subjects; for instance "hernia" occupies 84 pages, "hospitals" almost 100 pages, "hydrophobia" 31 pages, "hygiene" 117 pages, and "insane" and "insanity" 57 pages.

The value of this work in the study of the alleviation of human suffering is simply incalculable, and it behoves the profession and the public to see that no other duties shall be imposed upon Dr. Billings which will interfere with his giving his close personal supervision, which is necessary to the accuracy of the work, to the completion of this great undertaking, the publication of which redounds so highly to the honor of the Nation.

REVIEWS.

MANUAL OF PHYSIOLOGY, A TEXT-BOOK FOR STUDENTS OF MEDICINE. By GERALD F. YEO, M.D., F.R.C.S., Professor of Physiology in King's College, London, etc. With 301 engravings. Pp. 749. Philadelphia: Blakiston Son & Co., 1884.

THE rapid development of physiological science has rendered such standard works as that of Carpenter, so bulky, that an imperative demand for manuals of more moderate size has arisen, not only among students, but also among practitioners who desire to keep themselves thoroughly *au courant* with the wonderful advances recently made in this department of biology. To meet such a want Dr. Yeo has prepared this excellent text-book, which for a work of its limited scope is entitled to unqualified praise. The author has judiciously endeavored to avoid the introduction of theories which are as yet unestablished, and has omitted such details of methods as are unimportant for the younger class of students. Much space is saved by restricting statements to the mere facts, without any history of how our knowledge has been obtained, or to whom we owe the great debt of discovery in regard to them. Dr. Yeo's practical experience as a teacher and examiner of students, has taught, and so well taught him what par-

ticular subjects are difficult of comprehension by the average pupil, that these questions are elucidated with especial care, and yet the error of too elaborate explanation, at the expense of undue curtailment of other important departments of the science, is skilfully guarded against. Indeed, distinguishing characteristics of the work are perspicuity without diffuseness, and condensation without lack of precision or the omission of essential truths. The woodcuts are numerous and of excellent quality, those illustrating the admirable chapter devoted to reproduction and the development of the embryo, being especially valuable to a novice in this fascinating department of natural science.

A HANDBOOK OF THE DISEASES OF THE LIVER, BILIARY PASSAGES, AND PORTAL VEIN. By HENRY R. RUCKLEY, Licentiate of the Royal College of Physicians, Edinburgh. 8vo. pp. 221. High Wycombe, F. Westfield. London : W. Kent & Co.

THIS work, the author tells us, was suggested by his own necessity ; for after reading all the modern works on the subject, he felt that there was wanting a small, handy manual suitable for the general practitioner and student. We sincerely trust that active professional duty at High Wycombe will prevent his reading all the modern works on any other subject, lest a similar compulsion should seize him, and result in the production of another such dull, toneless compilation as the present volume.

SOCIETY PROCEEDINGS.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Thirty-fourth Annual Meeting, held at Ann Arbor, Michigan, August 26-31, 1885.

(Specially reported for THE MEDICAL NEWS.)

(Concluded from page 306)

DR. H. G. BEYER, of Washington, presented the following

BIOLOGICAL DEDUCTIONS FROM A COMPARATIVE STUDY OF THE INFLUENCE OF COCAINE AND ATROPINE ON THE ORGANS OF CIRCULATION.

The study of action of drugs on the animal organism has received such a step-motherly treatment at hands of scientists' investigations, that it is fair to make the general statement that there are very few drugs that will not admit of a reinvestigation by our present improved scientific methods. I do not propose, however, to go into the action of these drugs, and I shall briefly speak of the purely biological results which these experiments allow me to make.

These deductions are considered of sufficient importance to be brought before this Association, for the reason that they touch upon the complex but deeply interesting problem of the innervation of the vertebrate heart. The heart, histologically considered, is a compound organ, consisting of muscular, nervous, and connective tissue. No study of the action of any drug upon the heart can be considered complete, unless the nature of the action of such a drug upon each of these different elements composing the heart is clearly made out. The

extreme difficulty of this problem, however, must be apparent to you, even without my attempting to go into a review of the historical details of the controversy that exists between the best physiologists with regard to the action upon the heart of even the best-known drugs.

With reference to the action of atropine upon the heart, it is the opinion of Schmiedeberg, Harnack, and others, that it produces paralysis of the vagus endings within the heart, thus causing acceleration and augmentation in its action ; muscarine, in their opinion, stimulates these same nerve-endings, thus producing diastolic arrest.

Bowditch, as long ago as 1871, and more recently, also, Gaskell and Ransom, have come to the conclusion that atropine stimulates the muscular substance, and that the augmentation it produces in the heart's action is due to that influence, and not to a paralysis of the vagus endings.

Recently Amalie Glause, in her inaugural thesis, gives an account of some experiments, made in the laboratory of Professor Luchsinger at Berne, which tend to prove almost conclusively that muscarine paralyzes the heart muscle, instead of stimulating the vagus endings, and that, therefore, the diastolic arrest it produces is due to its paralyzing influence on cardiac muscle, rather than to its stimulating influence on the vagus endings. In other words, the antagonistic action of atropine and muscarine with reference to the heart according to Schmiedeberg, Harnack, and others, is a purely nervous phenomenon ; while, according to more recent and equally good observers, it is a purely muscular phenomenon.

From our last winter's work on the action of cocaine, atropine, and muscarine on the heart, we are enabled to add some further proof to the muscular nature of the action of these drugs on the heart, at the same time we may perhaps succeed in indirectly showing that atropine and cocaine, instead of paralyzing the vagus endings, slightly stimulate them.

Upon the first admission of atropinized blood into the isolated heart of the frog or terrapin, the heart-muscle preëminently manifests the action of some powerful stimulant. After a while, however, there arrives a stage of muscular exhaustion from over-stimulation, and, at the same time, there appears a peculiar dissociation of rhythm between auricles and ventricle, the auricles contracting two or three times to the ventricle once, quite independent of each other.

The dose of the drug may be so graduated that this peculiar rhythm can be kept up for any desired length of time, and, after the heart has been allowed to recover under normal blood, it can be reproduced many times during the course of one single experiment.

How are we, now, to explain this singular phenomenon ? Last year, in one of the Paris hospitals, under the service of Prof. Boudet, a patient came under observation who had a radial pulse of only 21 beats per minute, the auricles beating at the rate of 63 per minute. Prof. Chauveau took a sphygmographic tracing of this patient, and went to work investigating the pathogeny of this condition. By dividing one of the pneumogastrics in a dog (?) he obtained some dissociation of rhythm, but, by slightly stimulating with a galvanic current the left pneumogastric, he obtained a sphygmographic tracing which was identical with that taken from his

patient. If these observations are correct, which we have no apparent good reasons to doubt, I think that it is not at all improbable that the dissociation in rhythm which we have observed as produced by atropine is due to a slight stimulating action which this drug exerts on the vagus endings, and which becomes apparent after the muscular substance at the heart has begun to show signs of exhaustion.

Now, cocaine produces exactly the same dissociation of rhythm, but, unlike atropine, cocaine produces it almost at once, for the latter does not possess any stimulating properties on muscular tissue. The sympathetic nerve endings are equally stimulated by these two drugs, since the work done by the heart, during this stage of comparative muscular exhaustion and lowered ventricular rhythm, is still much greater than under normal conditions.

If muscarine produces cardiac diastolic arrest through its paralyzing influence on the muscular substance, and atropine and cocaine affect the heart in every respect alike, except that cocaine does not stimulate the muscular substance, then muscarine must produce diastolic arrest in the cocainized heart, which, indeed, it invariably does. And here we have another proof of the muscular nature of the atropine-muscarine-antagonism as manifested by the heart.

These experiments alone would, of course, not be sufficient to prove decisively, but, taken in conjunction with the experiments briefly alluded to above, they form a sort of crucial test.

We may now, with regard to the action of these drugs on the heart, formulate our conclusions as follows, viz.: Muscarine paralyzes the cardiac muscle; atropine stimulates the same. Atropine, furthermore, has a slight stimulating effect upon the vagus endings, and also on the endings of the accelerator or augmentor nerves of the heart. Cocaine affects the nerve-endings within the heart in the same manner as atropine does, but, unlike the latter, has no stimulating action on its muscular substance.

DR. C. S. MINOT, of Boston, read a paper

ON THE STRUCTURE OF THE HUMAN PLACENTA.

There are many clashing opinions about the physiology of the placenta. It is common to assume that there is intimate union between tissues of placenta and of the mother, and that the embryo derives nourishment from the mother through this close union. By the use of celloidine, we are able to hold substances in position and to make sections for microscopic examination, thus securing valuable possibilities for studying the placenta beyond previous means.

The structure of the placenta is remarkable, because of the great irregularity of the shape of its villi. I have made a large number of sections, some of them in 500 or 600 parts, which all fall apart when the celloidine is dissolved. Prof. Langhans has done good work in investigating these matters.

By the third week of gestation the placenta begins to develop; villi grow out from the ovum and touch the maternal tissue. The development of one side is much more rapid than that of the other. The only contact between the placenta and the maternal tissue takes place at the tips of these villi. We are unable to say

that we find here a true epithelium, but rather, apparently, a syncytial layer.

The human placenta consists of

1. The amniotic epithelium;
2. Connective tissue;
3. Stroma of chorion;
4. Cellular layer;
5. Fibroid layer;
6. Villi;
7. Chorionic epithelium;
8. Serotina.

There is no intergrowing of the maternal and foetal tissues. The placenta is mainly foetal, and the intervillous spaces are bounded only by foetal tissue. The fetus, then, is nourished by a uterine milk secreted in a manner not dissimilar to that of the milk in the breasts; and it is only partly nourished directly from the circulation of the blood of the parent.

PROF. GAGE stated that this theory simplified the problem of nutrition, but complicated that of respiration.

DR. MINOT replied that the fetus needed not much oxygenation of the blood, not having any work to do but to sustain its own life and growth, and blood of the fetus, both venous and arterial, is usually red, showing full oxygenation.

DR. MINOT also read a paper on

THE EVOLUTION OF THE LUNGS.

Heretofore no acceptable theory of the origin and evolution of the lungs has been promulgated. It has generally been believed that they are modified air sacs, appearing first in fishes, and developing into lungs in higher animals.

Lungs always arise out of the intestine of the embryo. The air sac of fishes arises out of the dorsal, while the lungs arise out of the ventral side of the embryo. He believes the lungs to be modified gills. They arise as pouches from the walls of the pharynx. In the embryo of mammals gill arches arise and develop on the ventral side. The pouch soon extends down and forms what all embryologists recognize as the beginning of the lungs. If we see a succession of pouches lying alongside each other, and formed in the same way, we homologize them, notwithstanding the different functions they subserve in the adult. The ear cavities, and the thyroid and thymus glands, as well as the lungs, arise from these gill pouches.

This paper was only advanced as a preliminary hypothesis.

PROF. COPE discussed the paper, and suggested that the present hypothesis of evolution may be sustained on the theory that in the embryology of fishes the original method of evolution may have been modified, as the germs of *polyparus* still show development of air sacs from the dorsal side.

DR. C. S. MINOT then read a paper on the

MORPHOLOGY OF THE SUPRARENAL CAPSULES.

Balfour and his scholars have maintained the theory of the double origin of the suprarenals. Examination of the human fetal capsule renders it difficult to accept this view, since the whole structure is similar throughout. There are masses and cords of cells which are in radial lines externally, but more irregular internally; but the cells of the cortex and medulla both present, in a six months' fetus, a similar and very remarkable appearance, so that it is difficult to admit that they are distinct tissues of two distinct origins. The histological character of the parenchyma was described and illustrated.

DR. MINOT also called attention to

A NEW MEMBRANE OF THE HUMAN SKIN.

In the human fetus there is a layer of large cells outside the horny layer, and entirely distinct from it. This layer is homologous with the epithelium of the sauropsida, and covers also the hairs and glands. Its presence probably accounts for the retention of the sebaceous secretions to form the *vernix caseosa*.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, September 3, 1885.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

DR. B. F. BAER read the following report of a case of

OVARIAN CYSTOMA COMPLICATED WITH PERITONITIS AND PHLEGMASIA ALBA DOLENS; DOUBLE OVARIOTOMY.

Mrs. M., æt. 31, has been a widow nine years, she had one child ten years ago, and had enjoyed good health until about three years before I saw her. At that time she observed that her abdomen was increasing in size. This gradually progressed for eighteen months, when she was large enough to attract the attention of her neighbors. After this the growth remained almost stationary, and did not affect her general health until the latter part of March of the present year, when she was suddenly seized with pain in the left iliac region. The pain was acute and radiating in character, extending principally down the anterior portion of the left thigh. She attributed the attack to an unusual exertion. Although she made an effort to continue her avocation,—that of seamstress—she was compelled to give up and send for her physician, my friend, Dr. John R. Haney, of Camden.

When Dr. Haney first saw her, her abdomen was very tender over its entire surface, purple from congestion, greatly distended and tympanitic in its upper but dull in its lower portion. She was suffering great pain and had constant nausea and vomiting, her skin was hot, pulse 120, and temperature 103°. From the history, symptoms, and physical signs elicited, the doctor diagnosed ovarian cystoma with supervening peritonitis. He administered quinia per rectum and morphia hypodermically, together with counter-irritation over the abdomen. Within a week the patient appeared to be better, when, through the kindness of Dr. Haney, I first saw her. The tympanites had disappeared, and the pain was not so severe, but the abdomen was still very tender on pressure, especially in the left iliac and right umbilical regions; her features were drawn and flushed, and presented an anxious expression; her tongue was dry and heavily coated, pulse quick, and temperature 102°. She lay quietly in the dorsal position with her thighs flexed. The abdomen was as large as at full term of gestation, and was projecting. It was dull on percussion everywhere except along the line of the colon, and in the epigastrium there was evident fluctuation. The uterus was retroverted, not freely mobile, and very tender on pressure on the left side. Above and upon it could be felt the lower border of the circumscribed growth which occupied the abdominal

cavity. I fully agreed with Dr. Haney's diagnosis of ovarian cyst complicated by peritonitis. As she seemed to be somewhat better, I advised a continuance of the treatment as previously pursued, with the hope of obviating the necessity of ovariotomy during the unfavorable condition in which she then was.

The peritonitis continued to improve slowly, but a new trouble presented itself in a very painful swelling of the left lower extremity. This continued until the limb was greatly increased in size. Its temperature was much higher than that of its fellow, which seemed to be in a normal condition. She now required large doses of morphia to relieve her pain, and she was losing flesh and strength. She still had nausea and took almost no nourishment. Her temperature and pulse had again risen to the highest point noted. Both she and her friends were willing and anxious that we should do something more radical than simply to wait for a more favorable condition for operating if we deemed it proper. I believed from the symptoms and physical signs, that the inflammatory action was external to the cyst and not within it, and for that reason decided to wait for a subsidence of the acute symptoms, which I rather confidently expected. At the same time I held myself in readiness to operate at once should the patient not improve or become worse. The next day she showed signs of slight improvement. Treatment, both local and general, continued. The acute symptoms gradually subsided to those of a subacute condition. The temperature had decreased to 101°, pulse 100 but weak. She was still unable to retain food and was extremely weak. I advised further delay, but she did not improve much after this, her temperature and pulse remaining about the same as that noted above. Her stomach had regained its power, to a slight degree, to retain and digest liquid food.

She had now been confined to her bed more than two months. Her left leg was powerless. There had not been the slightest improvement during the two previous weeks. We therefore decided to remove the tumor.

Operation.—June 19, 1885, assisted by Drs. J. K. Haney, W. H. Davis, and H. M. Christian, and in the presence of a section of the class from the Polyclinic, I made an incision three inches in length down to the peritoneum, and then checked the hemorrhage, which was free, with clamp forceps. I next very carefully incised the peritoneum, and found, as I had expected, that it was closely united to the cyst wall. These adhesions of cyst to peritoneum were universal, and it required careful and patient manipulation to separate them. The parts were exceedingly vascular and hemorrhage was profuse. After separating it as far as possible, I tapped the cyst and allowed the contents, which were semi-liquid and chocolate-colored, to drain away. I next closed the puncture made by the trocar, and then completed the separation of the cyst from its adhesions and removed it. As there was a very general and free oozing of blood from the broken vessels, I introduced a number of large flat sponges and spread them over the bleeding surface. An assistant now made firm pressure upon the external surface of the abdominal walls whilst I ligated the pedicle and removed the tumor. The cyst developed in the left ovary and the pedicle was slender, not unusually vascular, and of good length. The right ovary was diseased, contained a number of

small cysts, and was double the normal size. I removed it also. Examination now showed that the hemorrhage had almost ceased, but there were still a number of points from which blood flowed. The peritoneum was intensely injected and I disliked very much to pick up bleeding points for fear of making the hemorrhage worse. I therefore reapplied a large flat sponge, and had firm pressure again made from without whilst I proceeded to place the sutures for the closure of the incision. I then removed the sponge and found very little blood upon it. I replaced it by a long, narrow strip of sponge which I allowed to project from the lower angle of the wound and then again cleansed Douglas's cul-de-sac and other dependent portions of the peritoneal cavity, after which I quickly tied the sutures from above downwards removing the long sponge through the lower angle of the wound before I had encroached so closely upon it as to compress it in its removal. It was only slightly stained. I quickly applied the external dressing, making an unusual amount of pressure by cotton and bandage. The operation was finished, but the patient bore it badly. Her extremities were cold and purple, her face livid, and pulse very weak. Stimulants hypodermically, and the application of external heat, which were begun during the operation, were continued after she was returned to bed. She remained in an almost collapsed state for many hours, but gradually reacted, and the next morning was in a fair condition. Her temperature was lower than it had been for weeks, pulse 112 but weak, stomach quiet, no pain, no tympany. She had taken an occasional small piece of ice, but nothing else except the morphia, since the operation.

21st.—Temp. 102°; pulse 120. Slight pain and tenderness in left iliac region. She had been very weak and faint during the night, for which brandy had been administered in repeated small doses. The swelling and pain in the limb had diminished; she had not vomited since the operation, and felt hungry. Ordered a teaspoonful of milk every second hour.

22d.—Comfortable and doing well. Temp. 99°; pulse 90, and strong. Slight metrostaxis. Passed flatus per rectum. Milk increased to a tablespoonful, and retained.

24th.—Temp. 99°; pulse 85. General condition greatly improved. No pain; no tympany. Examined wound and found it united throughout; removed sutures.

25th.—Doing well, and is bright and cheerful. She took nearly a quart of milk during the last twenty-four hours, and digested it.

30th.—She has been gradually improving. Temp. normal; pulse 95. Bowels moved to-day. She is taking solid food, and expresses herself as feeling quite well. Limb improving. She can now move it.

July 12.—Sat up to-day for the first time, the twenty-second after the operation.

August 30.—A note received from Dr. Haney to-day informs me that Mrs. M. is going about attending to some of her duties, but that she has not yet regained her strength fully, and that her limb is still weak.

The recovery of this woman under the forlorn circumstances just narrated is certainly a great triumph for our art; but the case serves a better purpose in forcibly illustrating the danger of deferring operative interference in ovarian cystoma simply because the

patient is comfortable and suffering no inconvenience from the presence of the tumor. The subject of an ovarian tumor is in constant danger of injury from slight causes, which may produce such changes in the tumor as to render what might have been a simple and safe operation, one of extreme hazard. This had been a simple, slow-growing cyst, and had not markedly affected the health during its three years of existence; yet it suddenly became inflamed, and the patient narrowly escaped death as a result. The case furnishes a strong argument in favor of operation as soon as the disease is diagnosed. Of course there are qualifications, and each case must be decided on its own merits; but the rule that an ovarian tumor should be removed as soon as it is known to exist is the only safe one to follow.

As a striking contrast to the case just related, and to show the value of the principle enunciated, I will report the following case of

POLYCYSTIC OVARIAN TUMOR: DOUBLE OVARIOTOMY.

A. R. was sent to me August 5, 1885. She was nineteen years of age; single. Puberty was established at sixteen, and she had menstruated regularly until six months previously. She then, without cause so far as she knew, began to flow more freely at her periods, and they continued longer. About the same time she noticed a small lump in the right iliac region. This increased in size, so that soon the entire hypogastrium was distended, and when I first saw her she was as large as at the eighth month of gestation. Her face showed marked signs of emaciation and pallor, and the drawn, anxious expression of ovarian cystic disease. She was then having a profuse metrorrhagia every two weeks. She had not suffered any pain, and up to within a few weeks very little inconvenience, except from the frequent metrorrhagia. During the last month, however, her health had been failing. She had lost flesh, had a weak, languid feeling, and suffered much from the weight of the growth. Physical examination in the dorsal position revealed a projecting, slightly irregular abdomen, larger on the right side, dull on percussion over the entire anterior surface, but resonant along the line of the colon. Palpation showed imperfect fluctuation and several firm, irregular masses within the abdominal cavity. The vagina was virginal, the cervix uteri was pointing forwards, the body of the uterus retroverted, the whole organ enlarged and soft. It was only slightly movable independently of the tumor. The sound gave a measurement of three inches.

I diagnosed polycystic disease of the right ovary, and advised immediate operation.

Six days afterward, on August 11th, she entered my private hospital; and on the 13th I operated, with the assistance of Drs. H. M. Christian and J. N. Richards. I made an incision two and a half inches in length, and came upon the surface of the tumor, which presented the white, glistening, nacreous appearance especially common to thick-walled polycysts. Tapped with Hodge's trocar. The contents were so thick that they flowed very slowly, and it was necessary to puncture several smaller cysts, which was done without removing the instrument. Even then the mass did not collapse, much because of a large number of young or child cysts. After closing the puncture, I enlarged the incision

to three inches, but I had considerable difficulty in removing the tumor. It was necessary to make firm traction with rotatory movements whilst Dr. Christian exerted a counter-force and pressure through the abdominal walls. Fully ten minutes were occupied in delivering the tumor after it was tapped, but I was rewarded with an incision that looked so small that it seemed almost incredible that this large mass had passed through it. There had not been a single adhesion, but the pedicle was short, thick, and vascular. I tied it with Tait's Staffordshire knot, cut the tumor away, and dropped the stump. The tissues of the left ovary were found to be entirely disorganized and degenerated into a cyst as large as a walnut. This I also removed. The uterus presented a very vascular appearance and was somewhat enlarged. After assuring myself that the peritoneal cavity was entirely free from any foreign matter, I closed the incision, dressed the wound, and returned the patient to bed. Temperature normal, pulse 96; no pain, but as she felt a little sore and restless a quarter of a grain of morphine was given hypodermatically; small pieces of ice to relieve thirst.

14th.—8 A.M., temperature 99°; pulse 84; has passed a good night. At 1 P.M., twenty-six hours after the operation, milk in teaspoonful doses was allowed; water when she desired it.

15th.—Metrostaxis began this morning.

18th.—Union complete; removed sutures. Her recovery was uninterrupted. She sat up for a few minutes on the eleventh day, and went home, eight miles, in a carriage on the eighteenth day after the operation. To-day she sent a request to be permitted to go out, because she is feeling so well. Certainly nothing could have been gained by procrastination in this case.

DR. GOODELL congratulated Dr. Baer on the good results obtained in such a serious case as that first reported. Great care in the asepsis of these cases should be observed. In one of his cases of septicaemia, after complete union had been secured, and the stitches had been removed, and after the patient was up, an abscess was observed forming in the line of union and was very persistent. Finally, after careful search, a ligature which had been tied around the pedicle of one of the ovarian cysts was found and removed. Subsequently the other appeared, and after its removal the abscess healed.

He did not like to remove the stitches so early as Dr. Baer removed them; and he recalled a case in which Dr. Baer had assisted him. The operation was performed on December 5th. Convalescence was rapid and the patient was so impatient to be home on Christmas, that she could not be restrained, and on the nineteenth day after the operation she took the cars for home. The train was derailed and the jolting caused the cicatrix to open. The physician who was called in closed it immediately, and the patient recovered. In another case a cough caused the wound to burst open and reveal the bowels after the stitches had been removed. This patient also recovered. For these reasons he never removed the stitches before the eighth day, and not until the bowels had been opened.

Dr. Goodell inquired of Dr. Baer his method of closing the opening in the cyst after it had been tapped preparatory to its removal from the abdominal cavity.

Does he employ pressure forceps? What method of dressing the abdominal wound?

DR. BAER closes the cyst puncture with Wells's clamp forceps when the cyst wall is strong enough. In some cases he stitches up the opening or ties a string below it when the cyst walls are loose and soft. He closes the external wound, as he had been taught by Dr. Goodell, with silk sutures and dresses it with salicylated or absorbent cotton, adhesive strips to hold the cotton in place and take the strain off from the stitches, and over all a bandage. He removes the sutures on the fourth or fifth day, in order to avoid the danger of pus forming in the suture tracks, as has sometimes occurred when he has allowed them to remain as long as eight days.

DR. GOODELL exhibited his improved

UTERINE DILATOR.

He said that the main difficulty in the operation for the rapid dilatation of the cervical canal lies in the liability of the blades of the instrument to slip out. This he had, in a great measure, overcome by having shallow grooves cut into them. Into these grooves the tissues sink, and the resulting friction keeps the instrument in place.

Since he had called the attention of the Society to his instrument, not quite a year ago, he had performed the operation forty-one times for dysmenorrhœa and sterility, making in all, two hundred and nine such cases. In not a single instance had dangerous symptoms followed, and the average of success was a very large one. He had become firmly convinced that for dysmenorrhœa and sterility the operation of rapid dilatation of the cervical canal would, except in some very rare cases of stenosis of the os externum, wholly supersede the cutting operation, the use of tents, or the slow dilatation by any means whatever. For, by the former, not only is the measure of success far greater, but the danger from inflammation is very much less. He dilated the parts from three-quarters of an inch to one inch and a quarter, as measured by the register in the handles, watching the cervix carefully to see what strain it could bear. His instrument could be opened to the width of one and a half inches, but he resorted to that extreme divergence only when wishing to introduce his finger for diagnostic purposes. This he could not ordinarily do unless the parts were relaxed from hemorrhage. Usually, however, when suspecting the existence of a polypus, he did not find it needful to pass in his finger, for after a moderate dilatation he introduced a fenestrated forceps and opened it at haphazard. In this manner he has repeatedly caught and twisted off a polypus without knowing it was present, the subsequent removal of the growth through the os uteri being the most difficult part of the operation.

DR. BAER was strongly impressed by the case of a lady whom he had delivered to-day, as to the advisability of entirely giving up division of the cervix. A year and a half ago he had slit up the cervix posteriorly, and to-day he felt very anxious, during the first stage of labor, as to the probability of laceration of the uterus, starting from the seat of the former operation. The anterior lip was very long, coming down under the pubis, and the posterior lip could not be felt. The case will be reported fully. When the uterus contains a

polypus, the continued hemorrhages reduce the contractility, and a single dilatation will sometimes enlarge the os sufficiently to admit the finger or forceps; but, if the uterus is healthy, it contracts immediately after the withdrawal of the dilator. He could not recall an instance of inflammation following rapid dilatation. Sterility of long standing is seldom cured by dilatation or any other means.

DR. C. M. WILSON had seen recently in the practice of Dr. Ellwood Wilson a uterus, the cervix of which had been divided bilaterally some years ago. The operation had resulted in the development of the symptoms peculiar to a bad laceration of the cervix, with ectropion. Trachelorrhaphy was performed by Dr. Agnew, with complete relief to the patient. Dr. Wilson mentioned this case to call attention to the change in opinion and practice since Emmet proposed his operation.

DR. LONGAKER inquired as to the prevention of slipping of the dilator, and called attention to the original method of pressure over the fundus of the uterus.

DR. J. G. ALLEN has performed rapid dilatation more than seventy-five times, and has never seen any bad results from the operation. The blades of his instrument diverge as they separate, and there is then no disposition to slip out. The blades are more curved than in Dr. GoodeLL's instrument; he thinks that an advantage in holding the instrument in place. The handles are turned up so as not to touch the bed or table.

DR. GOODELL prefers the slight curve, so that in flexion of the uterus he can introduce the dilator with its curve reversed to the bend in the womb, and by opening the dilator in that position rectify the flexion of the organ. He prefers parallelism of the blades, because the stenosis of the cervix is greatest at the external os, and there is no need for dilatations above the internal os. He considers it dangerous to press the fundus of the uterus down while using the dilator, for fear of wounding or even penetrating the tissues, and he uses a strong tenaculum to hold the organ; but, since he had got Mr. Gemrig to roughen the blades by grooves, he had not been annoyed by the slipping of the instrument. He rarely finds it necessary to separate the blades more than one inch, but he sometimes does so to the extent of one and a half inches, especially when he wishes to introduce his finger into the uterine cavity.

DR. GOODELL exhibited two specimens of

PAROVARIAN CYSTS.

In each case the cyst was so detached from the ovary that the former could have been taken away without injury to the ovary. He was greatly tempted to practise conservative surgery in these cases, and leave the ovaries untouched; but, on account of apparently incipient cystic degeneration, they, also, were included in the ligature and removed. Both these cases were operated on in his private hospital, and both had recovered.

In his experience, the removal of parovarian or of broad ligament cysts was one of the most successful of operations. Out of a large number which he had performed, he could recall but a single fatal case, and in that the result seemed hardly due to the operation. The lady lived in a distant city, and he did not see her after the operation, which was a very easy one. At the end of a week the bowels were moved, the stitches re-

moved, and everything gave promise of an unusually prompt convalescence. On the twelfth day, however, she was seized with uncontrollable vomiting, and she died on the seventeenth day. Six months previously she had had an analogous attack of vomiting, from which she barely escaped with her life. Thus far this year he had had eighteen ovariectomies, and this was the only fatal case among them.

DR. MONTGOMERY wished to ascertain the opinion of the Society as to the advisability of removing the second ovary when, in an operation for the removal of an ovarian cyst, the other ovary was found to be slightly diseased. In his first ovariectomy, performed in 1879, the second ovary was found to contain numerous small cysts; it was not removed, and the patient has since been twice pregnant, and there has been no appearance of another tumor, nor any symptoms referable to the remaining ovary. If the climacteric has been passed, there would be no question about it.

DR. BAER inquired whether tapping ever cured parovarian cysts. It was formerly reported as a means of cure. Do they always return after tapping? Would Dr. GoodeLL recommend tapping in undoubted parovarian cyst? He himself felt strongly inclined toward abdominal section in all cases. He thinks the second ovary should be removed when it is not healthy, as the idea of a second operation is very depressing to a patient.

DR. MONTGOMERY knew of one instance of parovarian cyst which had been tapped and had refilled seven times. It was finally removed by him by pulling out the cyst, as, on opening the abdomen, he found the tumor universally adherent. Only one ligature was required, viz., on the stump of an enlarged ovary, which bulged prominently into the cyst cavity.

DR. J. G. ALLEN considered that as an ovary somewhat diseased may give rise to a pregnancy, it should be left. We know too little about the probability of the development of small cysts into large ones. Until we have certain data on the subject, it must be considered a case of lack of information and knowledge.

DR. PARISH was in accord with Dr. Allen as to the want of knowledge. He has seen diseased ovaries containing numerous small cysts in many autopsies, and there had been no symptom during life to excite a suspicion of their existence. The existence of minute cysts cannot be considered as proving any liability to the production of large ones. If the second ovary contained a cyst as large as a partridge's egg, he would remove it; but if numerous cysts, as small as split peas, were present, he would not. The possibility of conception should be considered, as well as that of a cyst.

DR. GOODELL acknowledged the truth of the points made by Drs. Allen and Parish, and he believed that he had repeatedly removed the second ovary unnecessarily; yet the history of his own ovariectomies shows a return of the disease in the remaining ovary in about two per cent., and he thought he erred on the safe and right side. The social condition of the patient would always have a great weight with him. If an heir were wanted, or the patient were young, he would leave a suspicious-looking ovary, or try to remove the diseased portion of it. But in the majority of his cases, where there was any doubt, he removed the ovary. Of course, under such a rule, he must remove ovaries which might

never give any trouble in the future. But the mental agony of women, when informed that the operation must be performed a second time upon them: and, on the other hand, the great joy and satisfaction of patients when assured, after the close of an operation, that both ovaries had been removed, have determined him that, other things being equal, it is better to remove the second ovary. As to the cure of parovarian cysts by tapping, his own experience is not sufficient yet to decide absolutely. He would advise the radical operation; but if the patient, after understanding the liability of return, wishes it, he would tap, as there is but little danger from tapping such cysts. A patient was tapped by Dr. Atlee, some twenty years ago; five years afterwards the cyst filled, and was tapped by Dr. Goodell. It then partly refilled, and so remained for a long while. The fluid then was gradually absorbed and never returned. He has had beside this two cases which he tapped, one four years ago, and the other three years ago, and there has been no return whatever of the fluid. On the other hand, he has had two or three cases in which the cyst burst spontaneously several times and yet refilled invariably. The rupture was followed immediately by some collapse, and pain and later by an excessive secretion of urine, with complete subsidence of the tumor. He had also heard of several cases of rupture, but, so far as he had learned the history of such cases, the cyst has always returned. The reports of the cure of ovarian cysts by tapping and injection of tincture of iodine must be true only of parovarian cysts.

DR. HARRIS knew of a case of parovarian cyst in which fourteen years had elapsed between the tapping and the subsequent refilling.

(To be concluded.)

NEWS ITEMS.

MONTREAL.

(From our Special Correspondent.)

SMALLPOX EPIDEMIC.—According to Dr. LaRocque's report recently published, there were, during the last three months, 315 deaths from smallpox; of these 270 were French Roman-Catholics, 27 Irish Roman-Catholics, and 18 English-speaking Protestants. Nearly three-fourths of the deaths amongst the French were children under five years of age,—unvaccinated, of course.

The Provincial Board of Health recently appointed by the Quebec Provincial Government, meets three times a week, but as yet has done little more. Nothing is said about compulsory vaccination. Isolation is advocated, as well as cleanliness, but apparently there is not backbone enough in the Board even to propose such an unpopular procedure as compulsory vaccination. Until compulsory vaccination is enforced, it will be vain to expect to control the epidemic. Certainly, the smallpox will not be banished by more thorough scavenging and the issuing of verbose circulars *advising* the public to isolate cases of smallpox, and to avail themselves of the privileges of vaccination. Six public vaccinators are scarcely enough to vaccinate a city of two hundred thousand inhabitants. Supposing each were to vaccinate 200 a day, it would take nearly six

months to go through the city. Last week one of the public vaccinators, making house to house visitations in the French part of the city, could only persuade three people to submit to vaccination.

MCGILL MEDICAL SCHOOL.—The new medical building in connection with McGill University is rapidly approaching completion. It is intended to open it formally and publicly some time in October. The building is a most commodious one; new chemical, physiological, histological, and pathological laboratories have been added, and the dissecting room, library, and museum have been much enlarged. There are also two new lecture rooms, each capable of comfortably seating nearly 300 students.

THE NEW ORGANIZATION OF THE INTERNATIONAL MEDICAL CONGRESS.—For the information of the profession, we herewith give a complete list of the officers of the proposed Congress as appointed by the Chicago Committee, and revised at the late New York meeting, the names of those who, so far as is publicly known, have declined to accept office under the new Committee, being printed in italics.

PRESIDENT.—Austin Flint, M.D., of New York.

VICE PRESIDENTS.—Drs. H. F. Campbell, of Augusta, Ga.; R. P. Howard, of Montreal; T. G. Richardson, of New Orleans; *A. Stille*, of Philadelphia; W. O. Baldwin, of Montgomery, Ala.; *H. H. Skillman*, of Lexington, Ky.; L. A. Sayre, of New York; W. W. Dawson, of Cincinnati; J. M. Toner, of Washington; Wm. Brodie, of Detroit; *John L. Atlee*, of Lancaster, Pa.; *Oliver Wendell Holmes*, of Boston; H. I. Bowditch, of Boston; and E. M. Moore, of Rochester.

SECRETARY GENERAL.—Drs. *John H. Packard*, of Philadelphia; N. S. Davis, of Chicago.

TREASURER.—Dr. E. S. F. Arnold, of New York.

CHAIRMAN OF FINANCE COMMITTEE.—F. S. Dennis, of New York.

GENERAL COMMITTEE.—Drs. Beverly Cole, of San Francisco, Chairman; J. S. Lynch, of Baltimore, Vice-Chairman; John V. Shoemaker, of Philadelphia, Secretary; Henry F. Campbell, of Georgia; *John S. Billings*, U. S. A.; *John M. Browne*, U. S. N.; *George J. Engelmann*, of St Louis; *I. Minis Hays*, of Philadelphia; *Christopher Johnston*, of Baltimore; Lewis A. Sayre, of New York; G. A. Ketchum, of Mobile; D. A. Linthicum, of Helena, Ark.; Charles Denison, of Denver, Col.; W. C. Wile, of Sandy Hook, Conn.; L. P. Bush, of Wilmington, Del.; A. Y. P. Garnett, of Washington; R. D. Murray, of Florida; R. Battey, of Rome, Ga.; E. P. Cook, of Mendota, Ill.; F. M. Beard, of Vincennes, Ind.; W. Watson, of Dubuque, Iowa.; D. W. Stormont, of Topeka, Kansas; W. H. Wathen, of Louisville; J. W. Dupree, of Baton Rouge, La.; S. C. Gordon, of Portland, Me.; A. H. Wilson, of South Boston, Mass.; A. R. Smart, of Hudson, Mich.; George F. French, of Minneapolis; J. M. Taylor, of Corinth, Miss.; N. F. Essig, of Plattsburg, Mo.; R. C. Moore, of Omaha, Neb.; J. W. Parsons, of Portsmouth, N. H.; William Pierson, of Orange, N. J.; Ellsworth Eliot, of New York; *Thomas F. Wood*, of Wilmington, N. C.; X. C. Scott, of Cleveland; W. E. Anthony, of Providence; R. A. Kinloch, of Charleston; F. L. Sim, of Memphis; William McLaughlin, of Austin, Texas; W. C. Dabney, of Char-

lottesville, Va.; E. T. Upham, of West Randolph, Vt.; G. Baird, of Wheeling; N. Senn, of Milwaukee; Robert Murray, U. S. A.; J. B. Hamilton, U. S. Marine-Hospital Service; F. M. Gunnell, U. S. N.

SECTION 1.—MEDICAL EDUCATION, LEGISLATION, AND REGISTRATION.

(Abolished at the New York Meeting.)

PRESIDENT.—*Dr. S. E. Chaillé*, of New Orleans.

VICE-PRESIDENTS.—Drs. George Cupples, of Texas; R. J. Dunglison, of Philadelphia.

SECRETARY.—Dr. E. Dunbar, of Boston.

COUNCIL.—Drs. H. D. Didama, of Syracuse; Henry Gibbons, of San Francisco; D. C. Gilman, of Baltimore; Jas. F. Harrison, of the University of Virginia; Charles A. Lindsley, of New Haven; *William Pepper*, of Philadelphia; J. F. Prioleau, of Charleston; *L. McLane Tiffany*, of Baltimore; C. L. Allen, of Rutland, Vt.; J. A. Dibrell, of Little Rock; H. O. Hitchcock, of Kalamazoo; J. W. Bailey, of Gainesville, Ga.; H. King Wylie, of Sanford, Fla.

SECTION 2.—ANATOMY.

PRESIDENT.—*Drs. Joseph Leidy*, of Philadelphia; W. H. Pancoast, of Philadelphia.

VICE PRESIDENTS.—Drs. C. W. Kelly, of Louisville; Samuel Logan, of New Orleans.

SECRETARIES.—*Drs. William W. Keen*, of Philadelphia; *George E. De Schweinitz*, of Philadelphia.

COUNCIL.—Drs. *Harrison Allen*, of Philadelphia; *Frank Baker*, of Washington; *Thomas Dwight*, of Boston; *Francis L. Parker*, of Charleston; *Charles T. Parkes*, of Chicago; Thomas T. Sabine, of New York; *Nicholas Senn*, of Milwaukee; Francis J. Shepherd, of Montreal; *Robert W. Shufeldt*, U. S. A.; George Halley, of Kansas City; A. Hewson, of Philadelphia; M. S. Craft, of Jackson, Miss.

SECTION 3.—PHYSIOLOGY.

PRESIDENT.—*Dr. John C. Dalton*, of New York.

VICE-PRESIDENTS.—*Drs. H. P. Bowditch*, of Boston; *J. F. Hibberd*, of Richmond, Ind.; H. N. Martin, of Baltimore; *Middleton Michel*, of Charleston.

SECRETARY.—*Dr. John G. Curtis*, of New York.

COUNCIL.—Drs. G. Baumgarten, of St. Louis; *Henry G. Beyer*, U. S. N.; Austin Flint, Jr., of New York; *William Lee*, of Washington; John J. Mason, of Newport; *Henry Sewall*, of Ann Arbor; W. F. Hyer, of Holly Springs, Miss.; *J. H. Wythe*, of San Francisco; Thos. S. Latimer, of Baltimore; A. F. Whelan, of Hillsdale, Mich.; S. Putnam, of Montpelier, Vt.; C. H. A. Kleinschmidt, of Washington; A. D. Brubaker, of Philadelphia.

SECTION 4.—PATHOLOGY.

PRESIDENT.—*Drs. Francis Delafield*, of New York; E. O. Shakespeare, of Philadelphia.

VICE-PRESIDENT.—*Dr. William Pepper*, of Philadelphia.

SECRETARIES.—Drs. William H. Welch, of Baltimore; H. M. Biggs, of New York.

COUNCIL.—Drs. *Christian Fenger*, of Chicago; *Reginald H. Fitz*, of Boston; Edward G. Janeway, of New York; James B. Johnson, of St. Louis; *George M. Sternberg*, U. S. A.; *William F. Whitney*, of Boston; C. H.

Hunter, of Minneapolis; H. D. Schmidt, of New Orleans; *Morris Longstreth*, of Philadelphia.

SECTION 5.—MEDICINE.

PRESIDENT.—*Drs. J. M. DaCosta*, of Philadelphia; A. B. Arnold, of Baltimore.

VICE-PRESIDENTS.—Drs. *James B. McCaw*, of Richmond; *Richard McSherry*, of Baltimore; A. B. Palmer, of Ann Arbor; Thomas F. Rochester, of Buffalo; A. Clark, of New York; *S. Weir Mitchell*, of Philadelphia; P. G. Robinson, of St. Louis.

SECRETARIES.—Drs. *Wm. Osler*, of Philadelphia; R. Harvey Reed, of Mansfield, Ohio; Walter Hay, of Chicago.

COUNCIL.—Drs. *S. C. Chew*, of Baltimore; *W. H. Geddings*, of Aiken, S. C.; *W. W. Johnston*, of Washington; George A. Ketchum, of Mobile; *Francis Minot*, of Boston; *Beverley Robinson*, of New York; *James T. Whittaker*, of Cincinnati; Jeff. Williamson, of Ottumwa, Iowa; T. B. Lester, of Kansas City; E. Grissom, of Raleigh; W. H. Phillips, of Canton, Ohio; J. P. Logan, of Atlanta; E. D. Ferguson, of Troy, N. Y.; J. Burnett, of Cleveland; S. S. Clark, of St. Albans, Vt.; J. Draper, of Brattleboro'; *Charles F. Folsom*, of Boston; John P. Gray, of Utica; J. S. Jewell, of Chicago; *Roberts Bartholow*, of Philadelphia; *Francis T. Miles*, of Baltimore; *Samuel G. Webber*, of Boston; Peter Bryce, of Tuscaloosa; W. W. Cleaver, of Lebanon, Ky.

SECTION 6.—SURGERY.

PRESIDENT.—*Drs. David W. Yandell*, of Louisville; William T. Briggs, of Nashville.

VICE-PRESIDENTS.—Drs. *D. Hayes Agnew*, of Philadelphia; *Samuel W. Gross*, of Philadelphia; W. H. Hingston, of Montreal; *R. A. Kinloch*, of Charleston; E. M. Moore, of Rochester; Moses Gunn, of Chicago.

SECRETARIES.—*Drs. John Collins Warren*, of Boston; Dudley P. Allen, of Cleveland.

COUNCIL.—Drs. *John Ashhurst, Jr.*, of Philadelphia; *David W. Cheever*, of Boston; *P. S. Conner*, of Cincinnati; George E. Fenwick, of Montreal; *F. H. Gerrish*, of Portland, Me.; J. C. Hutchison, of Brooklyn; *Christopher Johnston*, of Baltimore; Thomas M. Marckoe, of New York; *Alan P. Smith*, of Baltimore; J. Ford Thompson, of Washington; Theodore R. Varick, of Jersey City; O. Coskery, of Baltimore; Jas. McCann, of Pittsburgh; H. H. Mudd, of St. Louis; W. F. Westmoreland, of Atlanta; J. P. Wall, of Tampa, Fla.; Leroy M. Bingham, of Burlington, Vt.; T. A. Dunswoor, of Minneapolis; J. T. Carpenter, of Pottsville; W. S. Janney, of Philadelphia; J. E. Garretson, of Philadelphia; I. N. Quimby, of Jersey City; H. H. Smith, of Philadelphia; J. R. Weist, of Richmond, Ind.; S. D. Mercer, of Omaha; T. A. McGraw, of Detroit; W. F. Andrews, of Mitchell, Dakota; W. H. Austin, U. S. M. H. S.; C. A. Wheaton, of St. Paul; Thomas R. Russell, of Oshkosh, Wis.; J. H. Ransom, of Burlington, Iowa.

SECTION 7.—OBSTETRICS.

PRESIDENT.—*Dr. De Laskie Miller*, of Chicago.

SECTION 8.—GYNECOLOGY.

PRESIDENT.—*Dr. Robert Battey*, of Rome, Ga.

VICE-PRESIDENTS.—*Drs. William T. Howard*, of

Baltimore; R. B. Maury, of Memphis; *J. C. Reeve*, of Dayton; *Albert H. Smith*, of Philadelphia; T. Opie, of Baltimore; *T. A. Reamy*, of Cincinnati; W. H. Byford, of Chicago; *H. P. C. Wilson*, of Baltimore; T. Gailard Thomas, of New York.

SECRETARIES.—*Drs. James R. Chadwick*, of Boston; *George J. Engelmann*, of St. Louis.

COUNCIL.—*Drs. Robert P. Harris*, of Philadelphia; *A. F. A. King*, of Washington; *William T. Lusk*, of New York; *Theophilus Parvin*, of Philadelphia; *John Scott*, of San Francisco; *Donald Maclean*, of Council Bluffs; *H. O. Marcy*, of Boston; *D. W. C. Wey*, of Holly, Mich.; *E. S. Dunster*, of Ann Arbor; *Luke Robinson*, of San Francisco; *B. E. Hadra*, of San Antonio, Texas; *R. S. Sutton*, of Pittsburg; *R. Glisan*, of Portland, Oregon; *Wm. Varian*, of Titusville; *C. V. Mottram*, of Lawrence, Kansas; *E. P. Sale*, of Aberdeen, Miss.; *T. B. Harvey*, of Indianapolis; *E. Warner*, of Worcester, Mass.; *Lorenzo Fay*, of Lowell, Mass.; *W. H. Baker*, of Boston; *Wm. Gardner*, of Montreal; *William Goodell*, of Philadelphia; *A. Reeves Jackson*, of Chicago; *J. Taber Johnson*, of Washington; *E. Van de Warker*, of Syracuse.

SECTION 9.—OPHTHALMOLOGY.

PRESIDENT.—*Drs. E. Williams*, of Cincinnati; *A. W. Calhoun*, of Atlanta, Ga.

VICE-PRESIDENTS.—*Drs. H. D. Noyes*, of New York; *William Thomson*, of Philadelphia; *E. L. Holmes*, of Chicago.

SECRETARY.—*Dr. Swan M. Burnett*, of Washington.

COUNCIL.—*Drs. C. S. Bull*, of New York; *Hasket Derby*, of Boston; *E. G. Loring*, of New York; *William F. Norris*, of Philadelphia; *W. W. Seely*, of Cincinnati; *Samuel Theobald*, of Baltimore; *O. F. Wadsworth*, of Boston; *Henry W. Williams*, of Boston; *Peter D. Keyser*, of Philadelphia; *David Hunt*, of Boston; *J. J. Chisolm*, of Baltimore; *John Green*, of St. Louis; *B. Joy Jeffries*, of Boston; *B. E. Freyer*, of Kansas City; — *Minney*, of Topeka; *B. Baldwin*, of Montgomery, Ala.; *E. Smith*, of Detroit; *J. L. Thompson*, of Indianapolis; *A. G. Sinclair*, of Memphis; *W. H. Sanders*, of Mobile.

SECTION 10.—OTOTOLOGY (AND LARYNGOLOGY).

PRESIDENT.—*Drs. Clarence J. Blake*, of Boston; *S. J. Jones*, of Chicago.

VICE-PRESIDENTS.—*Drs. H. N. Spencer*, of St. Louis; *A. M. Wilder*, of San Francisco; *D. W. Reynolds*, of Louisville.

SECRETARY.—*Dr. S. O. Richey*, of Washington.

COUNCIL.—*Drs. J. Orne Greene*, of Boston; *George Strawbridge*, of Philadelphia; *C. H. Burnett*, of Philadelphia; *C. S. Turnbull*, of Philadelphia; *C. J. Lundy*, of Detroit; *E. H. Hazen*, of Davenport, Iowa; *J. C. Lippincott*, of Pittsburg; *J. H. White*, of Richmond.

SECTION 11.—DERMATOLOGY AND SYPHILIS.

PRESIDENT.—*Drs. W. A. Hardaway*, of St. Louis; *A. R. Robinson*, of New York.

VICE-PRESIDENTS.—*Drs. L. A. Duhring*, of Philadelphia; *James Nevins Hyde*, of Chicago; *James C. White*, of Boston; *J. M. Keller*, of Hot Springs, Ark.

SECRETARIES.—*Drs. F. E. Daniel*, of Fort Worth; *W. T. Corlett*, of Cleveland.

COUNCIL.—*Drs. I. E. Atkinson*, of Baltimore; *Edward Wiggleworth*, of Boston; *Henry C. Yarrow*, of Washington; *H. R. Carter*, U. S. M. H. S.; *J. A. Octerlony*, of Louisville; *J. H. McAchran*, of Laramie City, Wyoming Territory; *H. O. Walker*, of Detroit; *W. F. Glenn*, of Nashville; *Legrand N. Denslow*, of St. Paul.

SECTION 12.—LARYNGOLOGY.

(Combined with Section on Otology.)

PRESIDENT.—*Dr. J. N. Mackenzie*, of Baltimore.

VICE-PRESIDENTS.—*Drs. Frederick I. Knight*, of Boston; *M. F. Coomes*, of Louisville.

SECRETARIES.—*Drs. D. Bryson Delavan*, of New York; *E. Fletcher Ingalls*, of Chicago.

COUNCIL.—*Drs. W. H. Daly*, of Pittsburgh; *George W. Major*, of Montreal; *E. Carroll Morgan*, of Washington; *William Porter*, of St. Louis; *E. L. Shurley*, of Detroit; *R. P. Lincoln*, of New York; *C. E. Sajous*, of Philadelphia; *N. Goldthwaite*, of New York.

SECTION 13.—PUBLIC AND INTERNATIONAL HYGIENE.

PRESIDENT.—*Drs. Hosmer A. Johnson*, of Chicago; *Dr. Joseph Jones*, of New Orleans.

VICE-PRESIDENTS.—*Drs. A. L. Carroll*, of New York; *J. L. Cabell*, of the University of Virginia; *J. B. Lindsey*, of Nashville; *J. E. Reeve*, of Wheeling; *J. N. McCormick*, of Bowling Green, Ky.

SECRETARIES.—*Drs. Walter Wyman*, U. S. M. H. S.; *G. H. Rohé*, of Baltimore.

COUNCIL.—*Drs. H. B. Baker*, of Lansing; *Granville P. Conn*, of Concord, N. H.; *William H. Ford*, of Philadelphia; *D. W. Hand*, of St. Paul; *J. H. Kidder*, of Washington; *J. H. Rauch*, of Springfield, Ill.; *J. H. Raymond*, of Brooklyn; *Jos. R. Smith*, U. S. A.; *Stephen Smith*, of New York; *H. P. Wolcott*, of Cambridge, Mass.; *J. B. Thornton*, of Memphis; *H. S. Orme*, of Los Angeles; *R. M. Swearingen*, of Austin; *H. Leffmann*, of Philadelphia; *C. M. Hewit*, of Red Wing; *E. L. B. Godfrey*, of Camden, N. J.; *W. L. Schenck*, of Osage City, Kan.; *Benjamin Lee*, of Philadelphia; *Dudley P. Hart*, of Ark.; *Joseph Holt*, of New Orleans; *W. S. Robertson*, of Muscatine, Iowa; *A. L. Gihon*, U. S. N.; *E. S. Elder*, of Indianapolis; *O. C. De Wolf*, of Chicago; *H. F. Lyster*, of Detroit.

SECTION 14.—COLLECTIVE INVESTIGATION, NOMENCLATURE, VITAL STATISTICS, AND CLIMATOLOGY.

PRESIDENT.—*Dr. H. O. Marcy*, of Boston.

VICE-PRESIDENTS.—*Drs. Jerome Cochran* of Mobile; *Edwin M. Snow*, of Providence.

SECRETARY.—*Dr. James F. Ford*, of Chicago.

COUNCIL.—*Drs. Nathan Allen*, of Lowell; *R. A. Cleemann*, of Philadelphia; *J. H. Hollister*, of Chicago; *James T. Reeve*, of Appleton, Wis.; *James Tyson*, of Philadelphia; *A. C. Hamlin*, of Bangor; *T. J. Allen*, of Shreveport; *A. T. Saball*, of Jacksonville, Fla.; *T. S. Hopkins*, of Thomasville, Ga.; *O. W. White*, of Detroit; *J. W. Parsons*, of Portsmouth, N. H.; *P. C. Remendino*, of Santiago, Cal.; *T. T. Minor*, of Seattle, Washington Ter.; *Chas. Denison*, of Denver; *H. C. Ghent*, of Belton, Texas; *E. P. Hurd*, of Newburyport; *E. W. Morley*, of Cleveland; *W. P. Hart*, of Washington, Ark.; *R. D. Webb*, of Livingston, Ala.

SECTION 15.—MILITARY AND NAVAL SURGERY AND MEDICINE.

PRESIDENT.—Drs. *D. L. Huntington*, U. S. A.; *Henry H. Smith*, of Philadelphia.

VICE-PRESIDENTS.—Drs. *F. H. Hamilton*, of New York; *Hunter McGuire*, of Richmond; *S. P. Moore*, of Richmond; *Wm. E. Taylor*, U. S. A.; *P. O. Hooper*, of Little Rock; *E. Andrews*, of Chicago; *E. H. Gregory*, of St. Louis; *Donald McLean* of Ann Arbor.

SECRETARIES.—Drs. *B. F. Pope*, U. S. A.; *J. McF. Gaston*, of Atlanta.

COUNCIL.—Drs. *D. Bloodgood*, U. S. A.; *R. B. Bontecou*, of Troy, N. Y.; *J. H. Brinton*, of Philadelphia; *E. J. Marsh*, of Paterson, N. J.; *C. H. Mastin*, of Mobile; *George Peck*, U. S. N.; *W. F. Peck*, of Davenport, Iowa; *Charles Smart*, U. S. A.; *J. Rufus Tryon*, U. S. N.; *A. A. Woodhull*, U. S. A.; *J. W. Hamilton*, of Columbus, O.; *J. H. Murphy*, of St. Paul; *W. C. B. Fifield*, of Boston; *E. Goodman*, of Philadelphia; *W. S. Tremaine*, U. S. A.; *J. H. Peabody*, of Omaha; *S. T. Armstrong*, U. S. M. H. S.

SECTION 16.—PRACTICAL AND EXPERIMENTAL THERAPEUTICS.

PRESIDENT.—Drs. *Horatio C. Wood*, of Philadelphia; *F. H. Tirrell*, of San Francisco.

VICE-PRESIDENTS.—Drs. *Robert T. Edes*, of Boston; *F. Peyre Porcher*, of Charleston; *E. R. Squibb*, of Brooklyn.

SECRETARIES.—Drs. *Edward T. Reichert*, of Philadelphia; *Robert Meade Smith*, of Philadelphia.

COUNCIL.—Drs. *Robert Amory*, of Boston; *Henry M. Lyman*, of Chicago; *Samuel Nickels*, of Cincinnati; *Isaac Ott*, of Easton; *D. Webster Prentiss*, of Washington; *Charles Rice*, of New York; *Charles H. White*, U. S. N.; *Thomas F. Wood*, of Wilmington, N. C.; *G. Griswold*, of New York; *F. Stewart*, of Cincinnati; *J. M. Flint*, U. S. N.; *E. P. Fraser*, of Portland, Oregon; *W. G. Breck*, of Springfield, Mass.; *F. Woodbury*, of Philadelphia; *J. B. Van Velsas*, of Yankton, Dakota; *A. B. Tadlock*, of Knoxville, Tenn.; *J. F. Payne*, of Galveston; *T. Weed*, of Cleveland; *D. W. C. Wade*, of Holly, Mich.; *R. C. Moore*, of Omaha; *G. M. Garland*, of Boston; — *Buddick*, of Omaha; *Wm. Comton*, of Lancaster, Pa.

SECTION 17.—DISEASES OF CHILDREN.

PRESIDENT.—Dr. *J. Lewis Smith*, of New York.

VICE-PRESIDENTS.—Drs. *Samuel C. Busey*, of Washington; *De Laskie Miller*, of Chicago.

SECRETARY.—Dr. *E. T. Williams*, of Boston.

COUNCIL.—Drs. *F. Forcheimer*, of Cincinnati; *John M. Keating*, of Philadelphia; *Wm. Lee*, of Baltimore; *John H. Pope*, of Marshall, Texas; *W. B. Atkinson*, of Philadelphia; *E. Walker*, of Evansville, Ind.; *W. A. Conklin*, of Dayton, Ohio; *W. F. Holt*, of Macon, Ga.; *G. K. Johnson*, of Grand Rapids, Mich.; *C. A. Leale*, of New York; *S. H. Charlton*, of Seymour, Ind.; *W. H. Doughty*, of Augusta, Ga.; *B. H. Riggs*, of Selma, Ala.; *H. H. Middlecamp*, of Warrenton, Mo.; *J. A. Hodge*, of Henderson, Ky.; *G. W. Moody*, of Huron, Dakota; *A. A. Horner*, of Helena, Ark.

The vacancies in the different Sections caused by the numerous resignations were filled and "lists of Vice

Presidents, Secretaries, and Councilmen for each Section were named by the Committee of Arrangements, but as it was not practicable to ascertain at once who would accept the places assigned them, or who of those who had been announced in the medical press as declining to accept positions before the present rules and organization had been adopted, as given heretofore, might wish to withdraw such declination, the final adjustment of these offices was referred to the Executive Committee of the Congress, and all correspondence in relation thereto was transferred to the Secretary-General of the Congress."

The rule concerning membership was altered so as to read "The Congress shall consist of members of the regular profession of medicine, and of such other scientific men as the Executive Committee of the Congress may see fit to admit, who shall have inscribed their names on the register, and shall have taken out their tickets of admission." An amendment was offered that all members of the Congress shall be eligible to election of office, but it was summarily rejected; the overwhelming sentiment of the Committee being that none but members of the American Medical Association, or of societies in affiliation with it, shall hold office in the proposed Congress.

PUBLIC OPINION ON THE CONGRESS OUTLOOK.—The Committee, we have every reason to believe, made no concessions which can be accepted as such. They filled the one hundred and twenty odd vacancies with gentlemen sufficiently unknown to fame to have escaped nomination by them before, and presumably sufficiently poor in spirit to accept belated honors.—*Medical Record*, Sept. 12, 1885.

It would be idle to attempt concealment of the fact that not only is the success of the proposed meeting of the International Medical Congress at Washington imperilled by existing dissensions in the profession of America, but that it is a serious question whether the gathering can be permitted to be held there at all. We are alive to the possibility that the curious arrangements entered into by the clique of the American Medical Association may be fully carried out; but at the same time we are perfectly certain that a congress convened under such circumstances will not be international in any sense of the word, but will develop into nothing more imposin than a magnified mutual admiration society. There is no longer any doubt that all the leading members of the profession in America will at such a gathering be conspicuous by their absence, or that European practitioners will fail to find any recompense for this fact in receiving attentions from gentlemen whose names they are unable to associate with the extension or perfection of scientific knowledge or the advancement of the art of medicine.—*Medical Press and Circular*.

As the matter now stands, any member of the regular medical profession in this country is entitled to a seat on the floor of the Congress, but none who have declared in favor of the New Code heresy are permitted to sit in a position the least elevated. The New Code men are now given the privilege of being full privates, but they are debarred from all possibility of occupying any position above the ranks. Whether the heretics will thank-

fully accept the crumbs thus graciously thrown out to them remains to be seen. It is barely possible that they will not. Their admission to the Congress, they may possibly argue, is a concession that they are members of the medical profession of this country. This being the case, they may, in the obstinacy of their hearts, hold that no discrimination should be made against them in a Congress of the medical men of all countries, which is about to be held in this country, in pursuance of an invitation which was worded expressly to carry the idea that it came, not from any medical association, or other body of medical men, but from the medical profession of America, regardless of codes of ethics or aught else not strictly of a scientific nature. Had the invitation been issued by the American Medical Association on its own behalf, and not expressly on behalf of the entire profession, and as such been accepted by the last Congress, physicians not members of the Association would, doubtless, have felt complimented on being permitted to sit on the floor of the coming Congress. As matters actually stand, however, they may regard it as a piece of unwarrantable assumption when any medical society to which they may not belong seeks to lord it over them. They may be presumptuous enough to believe that they have quite as much right to share the honors of the Congress as has the Association which usurps the right to dole them out.

The Committee did a good work in rescinding the rule which closed the doors of the Congress against such members of the profession as hold independent views regarding the propriety of meeting in consultation those holding different views touching the action of drugs, and we cannot but regret that it did not also distribute among these gentlemen some of the honors of the Congress. Having acknowledged and attempted to correct the error of the Association in instructing it to exclude these gentlemen from the Congress, it should have gone a little further and removed all the obstacles to the complete success of the coming meeting.—*The Medical Age* (Detroit), September 10, 1885.

LUZERNE COUNTY (PA.) MEDICAL SOCIETY AND THE INTERNATIONAL MEDICAL CONGRESS.—At the stated meeting of the Luzerne County Medical Society held at Wilkes-Barre on Wednesday, September 9th, the following resolution, offered by Drs. Mayer and Guthrie, was discussed and then carried, but one vote being recorded in the negative:

Whereas, The International Medical Congress is a scientific body taking no cognizance of medical ethics or politics, therefore be it

Resolved, That it is the sense of the Luzerne County Medical Society that the officers and members of the Medical Congress should be the most eminent representatives of the entire regular profession of our country without regard to their views as to extraneous subjects.

Resolved, That the action of our brethren of Philadelphia, and of other cities, in declining to hold office in connection with the said Congress as now proposed to be organized, and in protesting against the method of its organization, is hereby heartily approved.

In seconding the motion for the acceptance of the preamble and resolutions offered by Dr. Guthrie, Dr. Mayer said :

I desire to state that I had intended presenting to you to-day other resolutions of similar tenor, but upon learn-

ing of Dr. Guthrie's purpose, will content myself with endeavoring to further the passage of these, which I so highly approve.

This whole matter referred to in the resolutions, when compressed into a nutshell, would seem to be as follows: That the committee of our National Association originally appointed to secure a proper representation of delegates and committees for the coming International Congress, made selections which gave satisfaction to the best professional judgment of our country; that then certain aspiring and neglected members of the Association, conspired at the last moment to exclude from the appointed list a large number of men favorably known abroad and distinguished at home for their zeal and success in scientific labors, upon the plea that these gentlemen differed from the majority of the Association about ethical matters, well the subjects of legitimate controversy. They succeeded in their plot and in the enforced substitution for many honored names, of others comparatively obscure. This action has caused a profound sensation in medical circles, and has aroused the best sentiment of the country in opposition to this usurpation. A large number of the ablest, the purest, and also the most conservative members of our profession, including near at hand such lights as D. Hayes Agnew, Bartholow, Stillé, Leidy, Mitchell, and Pepper, and at a distance other prominent men in New York, Boston, Baltimore, the South, and the West, have combined in a protest against this action of the Modified Committee and have declined to fill the positions assigned to them unless the original status of things be restored. In the meantime some of the members of this Committee are inundating the land with proclamation and manifesto, and are endeavoring by public circular and private solicitation to whip and spur county societies and individual members into adherence to their views.

I trust that our Society will now speak "with no uncertain sound" and place its stamp of reprobation upon this despotic attempt of a few to coerce the many, and by a unanimous vote confirm the manly protest made by our distinguished brethren in behalf of all that is broad, high-toned, liberal, and free in American medicine. Its name has been soiled in the dust of corrupt medical politics. Let us do our little to help cleanse it.

REWARD OFFERED.—*The Kansas City Medical Record* offers to pay a liberal reward for a germicide that will destroy the microbes that were instrumental in ruining the International Medical Congress and weakening the vitality of the American Medical Association by their onslaught at New Orleans.

THE AMERICAN GYNECOLOGICAL SOCIETY will hold its Tenth Annual Meeting at the Columbian University, in Washington, on Tuesday, Wednesday, and Thursday, September 22, 23, and 24, 1885.

Among the papers announced to be read are the following: The Natural Hygiene of Child-bearing Life, by Dr. S. C. Busey, of Washington; Remarks on the Use of Tarnier's Forceps, by Dr. Ellwood Wilson, of Philadelphia; Facial Paralysis in the Infant from the Use of the Obstetric Forceps, by Dr. T. Parvin, of Philadelphia; The Genu-pectoral Posture in the Prolonged Nausea and Vomiting of Pregnancy, with Cases, by Dr. H. F. Campbell, of Augusta, Ga.; Two Rare Cases of Abdominal Surgery (The President's Ad-

dress), by Dr. W. T. Howard, of Baltimore; The Care of the Perineum during Labor, by Dr. T. A. Reamy, of Cincinnati; Report of a Case of Caesarean Operation, by Dr. E. W. Jenks, of Detroit; Puerperal Diphtheria, by Dr. H. J. Garrigues, of New York; A Modification of Emmet's Cervix Operation in Certain Cases, with a Case, by Dr. R. S. Sutton, of Pittsburgh; Inflammation of the Parotid Glands after Ovariectomy, by Dr. William Goodell, of Philadelphia; A Study of an Unusual Type of Puerperal Fever, by Dr. Fordyce Barker, of New York; Peristalsis of the Genital Tract, by Dr. J. R. Chadwick, of Boston; Four Cases of Oophorectomy, with Remarks, by Dr. Joseph Taber Johnson, of Washington. Members of the profession are cordially invited to attend the meeting.

SMALLPOX CASES IN MONTREAL.—There were 48 deaths from smallpox in Montreal last Sunday, and in the week ending on that day there were 128 deaths. Of these 118 were French-Canadian Catholics, five other Catholics, five Protestants, and 111 were under ten years of age.

In answer to a question last Monday the chairman of the Health Committee said that there were probably 800 cases in the city. A number of cases are reported in the suburbs adjoining Montreal. In a building called Noah's Ark, where twenty-four families live, five deaths occurred on Saturday, and one dead patient and seventeen live ones were removed from there on Monday last.

A meeting of the Citizens' Committee was held on Monday afternoon, when the inaction of the Civic Board of Health was severely criticised. A petition was then read which asked that the City Council grant to the Citizens' Committee what should be known as the Emergency Health Committee, and incorporate them with the Civic Health Committee. If this authority was granted they would within six hours begin complete isolation of all known patients, by the erection and completion within six days of additional temporary hospital accommodation. House to house inspection will be made to reveal unreported cases and to see that all persons are vaccinated. At the meeting of the Council it was decided to increase the Board of Health by five members and to add nine members of the Citizens' Committee to act in concert with them.

At a meeting of the Provincial Board of Health a regulation was passed granting to all health officials and medical men full power to enter all houses where smallpox might be supposed to exist, as well as factories, mills, and other establishments, and to order any measures which they may deem advisable to prevent the spreading of the epidemic. The Civic Hospital was taken charge of on Monday by the Gray Nuns.

The Finance Committee has granted \$50,000 to stamp out the epidemic, and the Chairman has been authorized to give whatever sum the Health Board asks for.

THE NEW YORK STATE BOARD OF HEALTH is making arrangements to furnish vaccine virus for the purpose of vaccinating people all along the Canadian border of the State.

A PRIZE FOR THE BEST INSTRUMENT FOR THE IMPROVEMENT OF HEARING.—Baron Léon de Lerval, of Nice, has offered by occasion of the Third International Congress for Otology, a prize of 3000 francs for the best

instrument (easily carried), constructed according to the principle of the microphone for improvement of hearing in cases of partial deafness.

Instruments of this description, intended for competition, are to be sent before the 31st of December, 1887, to one of the undersigned, members of the jury, appointed at the instance of Baron Léon de Lerval, by the Third International Congress for Otology. Such instruments only are admitted to compete as are completely worked out; at the examination the perfection of the mechanical construction, the right application of the laws of physics, and, above all, the power of improving the hearing will be taken into consideration.

The verdict of the jury and the awarding of the prize will take place at the Fourth International Congress for Otology, to be held at Brussels, in September, 1888. Should none of the instruments presented be found worthy of obtaining the prize, the jury reserve to themselves the right of keeping the competition open until the meeting of the next International Congress for Otology.

The members of the jury are Prof. Hagenbach Bischoff, Ph. D., M.D., Chairman of the Jury, Basle (Missionstr. 20); Benni, M.D., Warsaw (16 Bracka); Prof. Burckhardt-Merian, M.D., Basle (42 Albanvorstadt); Gellé, M.D., Paris (49 Rue Boulard); Prof. Adam Politzer, M.D., Vienna (I Gonzagasse 19).

OBITUARY RECORD.—DR. EUGENIUS A. HILDRETH, one of the most prominent physicians and citizens of Wheeling, Va., died, after a short illness, August 31, ult., after an active professional life of nearly forty years. He was a careful observer of atmospheric phenomena, and his writings on this and kindred subjects are particularly interesting and useful.

A cablegram dated London, September 12, announces the death of WILLIAM AUGUSTUS GUY, M.B., F.R.S., the eminent physician and author of a number of medical works. Dr. Guy was born at Chichester, England, in 1810. He was educated at Guy's Hospital and Pembroke College, Cambridge. In 1838 he was appointed Professor of Forensic Medicine in King's College, London. In 1846 he became Dean of the Medical Department, which position he held until 1858. In 1869 he was made Professor of Hygiene. Dr. Guy wrote many essays on subjects connected with public health and toxicology, and he was the author of a well-known textbook on *The Principles of Forensic Medicine*.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICES SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM SEPTEMBER 8 TO SEPTEMBER 14, 1885.

MCKEE, J. C., Major and Surgeon.—Sick leave still further extended three months, on Surgeon's certificate of disability.—*S. O. 204, A. G. O.*, September 7, 1885.

PATZKI, J. H., Captain and Assistant Surgeon.—Assigned to duty as Post Surgeon at Jackson Barracks, New Orleans, La.—*S. O. 192, Department of the East*, September 9, 1885.

POLHEMUS, A. S., First Lieutenant and Assistant Surgeon.—When relieved at Fort McDermitt, Nevada, assigned to temporary duty at Presidio of San Francisco, Cal.—*S. O. 87, c. s., Department of California*.

KENDALL, WM. P., First Lieutenant and Assistant Surgeon.—Relieved from duty at Presidio of San Francisco, Cal., and assigned to duty as Post Surgeon at Fort McDermitt, Nevada, relieving Assistant Surgeon Polhemus.—*S. O. 57, Department of California*, August 31, 1885.